

**REDEFINING THE STREET AS A THIRD PLACE:
A DESIGN TOOLKIT FOR KAPAHULU AVENUE**

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ABSTRACT

Today, when we think of the word "street," the first image that comes to mind is often cars. Historically, however, streets were places where people were more often journeying on foot, stopping to greet one another and converse. While streets are now primarily used for transportation, the purpose of streets can be redefined to make them into places that encourage social interaction and bring a better quality of life to the surrounding communities. Methods of transforming streets exist, but are these successful in creating a place for the people of the local community?

This project proposes the concept of redefining the street as a "third place" as a strategy for transforming an existing street from a space for transportation vehicles into a place for people of the local community. The intent of this project is to define place, develop an understanding of what it means for a space to be a place, outline what makes a place successful, understand the third place concept, and investigate how a street can be redefined as a third place. In addition, this project also explores current methods of street design and examines various existing street design guidelines in order to identify which design principles and design elements encourage turning streets into third places.

Using the existing knowledge and research about place, street design, and design guidelines, this project developed a design toolkit for the Kapahulu Community that can be used as an inspirational guide for both redefining and transforming Kapahulu Avenue into a place primarily for the local community. This project, using the design toolkit created for this site rather than current planning methods, also presents possible changes for Kapahulu Avenue. Ultimately, the goal of this project is to develop a design approach that will help to create a pedestrian-friendly environment that retains and represents the community's eclectic character. With careful planning and consideration for what exists along this street, Kapahulu Avenue has the potential to become a vibrant third place.

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LIST OF ABBREVIATIONS

DPP	City & County of Honolulu Department of Planning and Permitting
DTS	City & County of Honolulu Department of Transportation Services
HBL	Hawaii Bicycling League
mph	miles per hour
NACTO	National Association of City Transportation Officials
NMSC	National Main Street Center
PPS	Project for Public Spaces
R.E.A.C.H.	Revenue Enhancements and Customer Hospitality
SFO	San Francisco International Airport
SSFM	SSFM International, Inc.
US	United States
UHM	University of Hawaii at Manoa

INTRODUCTION

Think of the word “street.” What do you see in your mind’s eye? Is your street populated mainly with cars or with pedestrians? If you first associate streets with cars, you are not alone. Today, the street is often viewed as a transportation space where vehicles such as cars, trucks, and buses have priority. In many older neighborhoods that were built for a smaller scale of human activity but which are located adjacent to busier, more populated areas, main streets often become thoroughfares (“a street open at both ends”¹) or corridors, further stressing the modern notion of the main street as a space for vehicular transportation. An example of this phenomenon is Kapahulu Avenue.

Located between Kaimuki and Waikiki on the island of O’ahu lies Kapahulu neighborhood. Kapahulu Avenue is the neighborhood’s main street; it is lined with businesses, restaurants, and a supermarket complex and is the primary thoroughfare between Waikiki’s east entrance and Interstate H1. Kapahulu Avenue is locally known for its often-congested traffic and noise.² The buildings along Kapahulu Avenue and within the neighborhood encompass various styles and eras of architecture. The area is home to sixty-eight historic buildings (catalogued by the University of Hawai’i at Mānoa’s American Studies classes). Some residents are concerned that Kapahulu’s historic character is quickly fading with the modern renovations of existing buildings, the construction of new buildings, and the presence of the supermarket complex that was completed in 2005.³ The area of Kapahulu Avenue between the Board of Water Supply’s Kaimuki Pumping Station and the Waikiki-Kapahulu Fire Station will be the physical site location for this design project.

¹ *Merriam-Webster's Collegiate Dictionary*, 11th ed., s.v. “thoroughfare,” accessed May 7, 2015, <http://www.merriam-webster.com/dictionary/space>.

² Ragnar Carlson, “Visioning Kapahulu: A new big box raises--and may answer-- questions about the meaning of community action,” *Honolulu Weekly*, September 7, 2006, accessed December 28, 2014, <http://honoluluweekly.com/cover/2005/09/visioning-kapahulu/>.

³ Mike Leidemann, “Kapahulu’s past can shape its future,” *Honolulu Advertiser*, June 19, 2004, accessed December 28, 2014, <http://the.honoluluadvertiser.com/article/2004/Jun/19/In/In13a.html>.

Historically, streets were places where people in the community would often stop and converse. They were places where children could play without the dangers presented by today's cars.⁴ Nonetheless, times change; cities evolve according to the needs of a society.⁵ Today, streets are used primarily for transportation. However, the purpose of streets can be redefined, creating places that encourage social interaction, bringing a better quality of life to the community. Methods of turning streets into places exist today, such as the National Complete Streets Coalition, the shared space movement, and the Main Street Program. Each of these aims to redesign streets, making them into better functioning, less vehicle-centric spaces; but are these programs really turning these streets, or spaces, into places?

In 2001, the Kapahulu community, led by planner John Whalen, completed the Kapahulu Community Plan, which laid out a vision for the future development of Kapahulu. This plan specified a need for more open public spaces, more room for parking, and development that reflected Kapahulu's mixed-use history. The plan called for the state to purchase a lot along the avenue that would allow them to achieve some of these goals. However, Safeway Inc. also had its sights set on the same lot and was able to purchase it and build a new supermarket complex there.⁶ Since Kapahulu Avenue is a commercial thoroughfare lined with an eclectic mix of historic architectural styles, we must identify a street design method that can turn the avenue into a place for the local community.

This project proposes a design toolkit for reshaping streets into third places as a strategy for transforming an existing street from a space for transportation vehicles into a place for people. By creating opportunities for better social interaction and preservation of the neighborhood, a better quality of life for people may result. The goal of this project is not only to define a design toolkit for Kapahulu Avenue, but also transform Kapahulu Avenue into a welcoming place primarily for the local community. This project will present possible changes for Kapahulu Avenue using the

⁴ Project for Public Spaces, "Streets as Places: How Transportation can Create a Sense of Community," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/reference/streets-as-places-how-transportation-can-create-a-sense-of-community/>.

⁵ Witold Rybczynski, *City Life* (New York: Touchstone, 1995), 50.

⁶ Ragnar Carlson, "Visioning Kapahulu: A new big box raises--and may answer--questions about the meaning of community action," *Honolulu Weekly*, September 7, 2006, accessed December 28, 2014, <http://honoluluweekly.com/cover/2005/09/visioning-kapahulu/>.

design toolkit created for this site, rather than current planning methods. Ultimately, this design approach will create a pedestrian-friendly environment that retains and represents the community's eclectic character. With careful planning and consideration for what exists along this street, Kapahulu Avenue has the potential to become a vibrant third place.

PART I | THE EXISTING KNOWLEDGE

CHAPTER 1 | DEVELOPMENT OF THE AMERICAN CITY

Cities are continuously growing and evolving, but are they growing and evolving in ways that are beneficial to those who call them home? With the introduction of mass production during the Industrial Revolution and the continual advancement of technology, cities are evolving at an ever faster pace. Although the Industrial Revolution remains one of the most influential movements in the history of the American city, numerous other historical trends, events, and movements have also played significant roles in its development.

In his book *City Life*, author, professor, and architect Witold Rybczynski writes, "...cities are always a reflection of the culture of a particular period.... [W]e must see cities in their cultural and historical context."⁷ "[C]ities and towns," he goes on, "...have always been local responses that incorporate local needs and local dreams. In order to understand our own cities...we need to examine our own urban past."⁸ Rybczynski makes a good point. How can planners and designers evolve cities without understanding how and why cities have changed over time? Planners, designers, and architects need to understand that in both the past and the present, the people of a society have a hand in shaping the environment in which they live, work, and play. Essentially, the planning and development of a city should revolve around the needs of the people. Understanding the trends, events, and movements that have influenced the development of a city can bring to light methods and ideas that have worked well in the past as well as methods and ideas that did not work well or could be improved on in order to work toward this goal of developing cities for people.

This chapter presents a brief overview of the trends, events, and movements considered to be the origins of the development of the American city. A separate discussion about the evolution of the street and its purpose in a city is presented in chapter four.

⁷ Witold Rybczynski, *City Life* (New York: Touchstone, 1995), 50.

⁸ Ibid.

1.1 Early City Forms

Over the last few centuries, cities have manifested in different forms. Some forms were arrived at naturally; others were intentionally and strategically laid out on the land by city planners. In their book *Urban Design for an Urban Century: Placemaking for People*, Lance Jay Brown, David Dixon, and Oliver Gillham identify two city forms that were used in early western civilizations: the organic form and the geometric form. Rybczynski, in a similar discussion, examines American city planner Kevin Lynch's three conceptual models of cities—the cosmic, the organic, and the practical. For the purpose of this study, the organic city, and the geometric city (or practical model) will be discussed.

1.1.1 The Organic City

The organic city developed, as its name indicates, organically. Prime settlement locations were determined by the land's fertility, access to water, and potential position for defense or proximity to a trading route. As settlement populations grew, the city's form expanded following a radio-concentric growth pattern. If settlements were in close proximity to each other, they sometimes merged. With populations growing, settlements turned into small villages, small villages turned into towns, and towns eventually turned into cities.⁹

Rybczynski's description of Lynch's organic model is similar to the organic city Brown, Dixon, and Gillham describe. According to Rybczynski, this type of city and the natural appearance of its layout form organically through the accrual of settlements. Rybczynski asserts that organic cities can be "...considered as a kind of organism: cohesive, balanced, indivisible."¹⁰

Streets in the organic city are described as having a variety of widths, meandering through the city along shifting axes.¹¹ Rybczynski speculates that "meandering pedestrian movement"¹² may have been at the center of the planning of the organic city. Similarly, Brown, Dixon, and Gillham write that streets and public

⁹ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 28.

¹⁰ Witold Rybczynski, *City Life* (New York: Touchstone, 1995), 46.

¹¹ Ibid.

¹² Ibid.

ways were derived from existing paths that people and animals used on their journeys.¹³

Two early examples of the organic city model are the medieval town and the traditional Islamic city. A large-scale example of an organic medieval city is London. London was built over many centuries through the continual addition of neighborhoods that eventually resulted in one large city.¹⁴ Two Italian cities, Sienna and Venice, are also considered examples of organic medieval cities, but the development of Venice stands out because of its unique relationship with water. Venice is a city of islands, built on and around water. Its major transportation routes are comprised of canals and bridges.¹⁵ Venice began as a collection of island settlements that were developed over time and finally merged to create one city. The canal systems were built as a result of the city's island-composition, allowing movement through the city via watercraft.¹⁶

1.1.2 The Geometric City

The geometric city form dates back to around 2600 BCE, according to Brown, Dixon, and Gillham, and is "...comprised [of] blocks formed by streets running at right angles" in rectilinear patterns, often creating an overall grid pattern.¹⁷ This city form had several distinct advantages over other city forms. Simple geometric city planning allowed for rapid construction. In colonial settlements, this form provided a practical system for land distribution. This form also simplified the designation of land, depending on its use and function.¹⁸

Rybczynski's description of Lynch's second city model, the practical model, is similar to the geometric city Brown, Dixon, and Gillham describe. Rybczynski explains that practical cities are fundamentally "...pragmatic and functional; they grow according to material needs, as new parts are added and as old parts are

¹³ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 28.

¹⁴ Witold Rybczynski, *City Life* (New York: Touchstone, 1995), 46.

¹⁵ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 28.

¹⁶ Witold Rybczynski, *City Life* (New York: Touchstone, 1995), 46.

¹⁷ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 29.

¹⁸ Ibid.

altered."¹⁹ Also, similar to the street layout of a geometric city, the practical model's streets often follow an orthogonal grid pattern.²⁰

According to Brown, Dixon, and Gillham, the planning and design of a geometric city was a sign of a mature society and suggestive of an authoritarian rule since such cities were usually planned in advance. The planning involved designating "...central places for religion and commerce, remote outposts for control of regional populations, or colonial encampments designed with defense and control as their priority."²¹ In addition, according to Rybczynski, the practical city was "...a machine for commerce."²²

Some of the earliest examples of the geometric city include early cities of the Indus River Valley such as Mohenjo-Daro and Harapa. The seventeenth to fifteenth centuries BCE towns in both Babylon and China also displayed geometric city characteristics. This form also appeared in Egyptian cities such as fourteenth century BCE Amarna and nineteenth century BCE Kahun, both of which display a gridiron plan.²³

The geometric city and the practical model describe the same type of city and, for the sake of this research, will be simply called the geometric city. The geometric city represents the first known examples of pre-meditated city design. The societies that used this form of city planning were able to build their cities according to their needs and preferences, and also to allocate, define, and separate land systematically and with ease.

1.1.3 The Miletian Plan

Named after the Greek city of Miletus located in the region once known as Anatolia or Asia Minor in today's Turkey, the Miletian plan (see Figure 1) represents an early example of the geometric city. The Miletus city planners applied a different approach to the site's layout than that of typical mainland Greek cities. While cities

¹⁹ Witold Rybczynski, *City Life* (New York: Touchstone, 1995), 43-44.

²⁰ Ibid., 44.

²¹ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 29.

²² Witold Rybczynski, *City Life* (New York: Touchstone, 1995), 43.

²³ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 29.

on the Greek mainland developed an organic layout that followed the topography of the site, the Greek cities in Anatolia followed a geometric pattern known as the gridiron plan, or a plan in which streets, placed at right angles to each other, form an overall grid pattern.²⁴

The Miletus plan, also sometimes called the Hippodamian plan, is credited to the ancient Greek architect Hippodamus. This plan creates an orderly, organized city in which wide streets are laid out in a gridiron or rectilinear pattern around a group of public spaces at the center.²⁵ These public spaces included "[s]hrines, theaters, government buildings, market space, and the agora (a central space where athletic, political, artistic, and spiritual activity took place)."²⁶ Another distinction of the Miletian plan was the allotment of land for specific public, sacred, and private uses. Sites for public and sacred use were selected in advance; the remaining land was designated for private use, especially housing.²⁷

The Miletian plan gained fame among the Greeks at the time. They began to use this plan for building cities throughout the Mediterranean region and for building Greek outposts in Italy. The Romans soon took an interest and began applying this gridiron pattern to their city planning as well.²⁸

The Miletian plan has been one of the most commonly used city plans for developing American cities. A majority of American cities today were inspired by or designed using the plan's simple and orderly organizational patterns.²⁹ Furthermore, the method Hippodamus used for allocating land in the initial stages of city planning is an early example of today's zoning.³⁰

²⁴ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 29.

²⁵ Ibid.

²⁶ Dilliana Vassileva, "Hippodamus and Early Planned Cities," *Museum of the City*, accessed April 5, 2015, <http://www.museumofthecity.org/hippodamus-and-early-planned-cities/>.

²⁷ Ibid.

²⁸ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 29.

²⁹ Ibid.

³⁰ Dilliana Vassileva, "Hippodamus and Early Planned Cities," *Museum of the City*, accessed April 5, 2015, <http://www.museumofthecity.org/hippodamus-and-early-planned-cities/>.

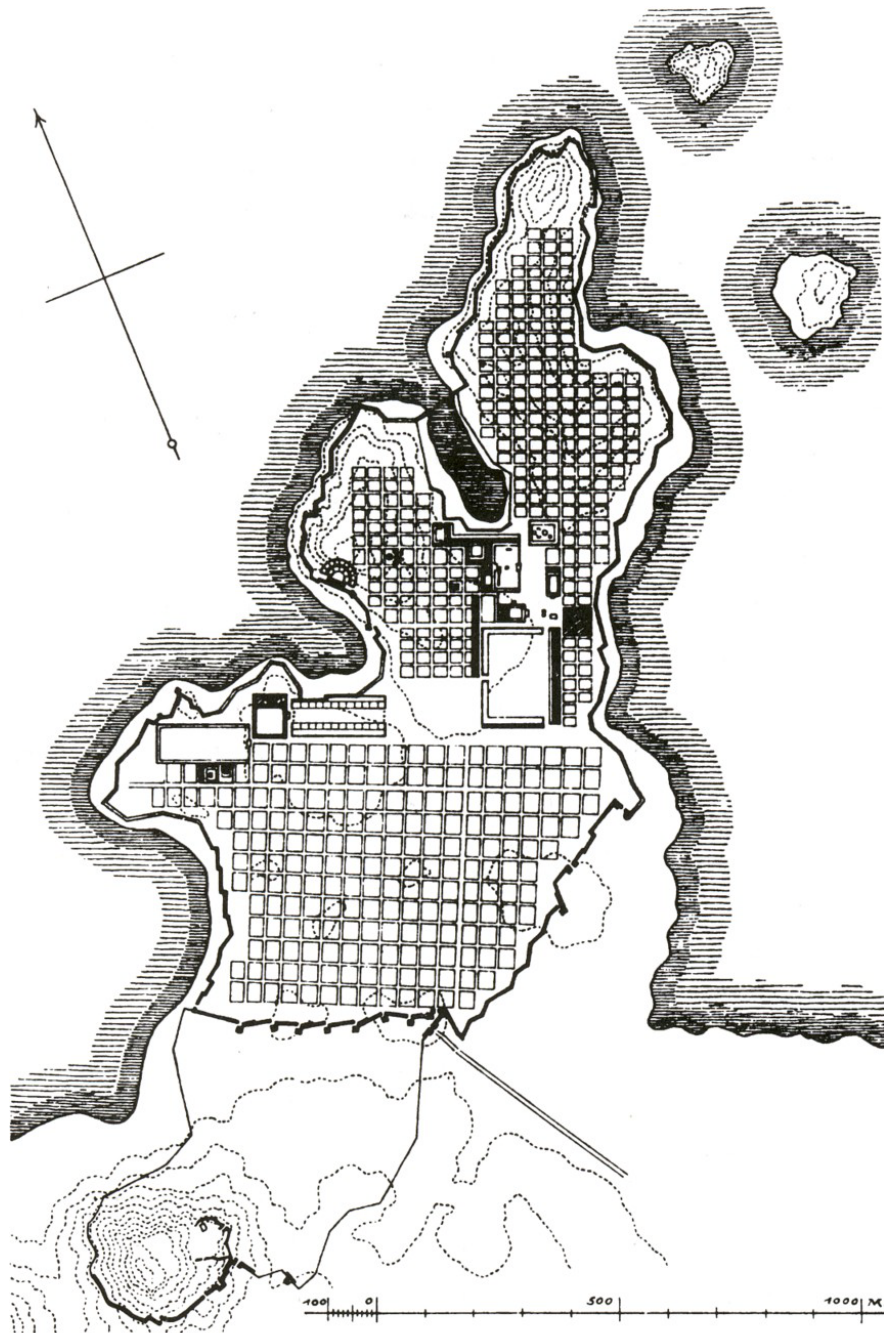


Figure 1. Hippodamus, *The city plan of the ancient city of Miletus, Greece.* circa 400 f.Kr.

Source: Den svenska staden. Available from: Wikimedia Commons, http://commons.wikimedia.org/wiki/File:Miletos_stadsplan_400.jpg#filehistory (accessed April 14, 2015).

1.2 Baroque City Planning

In the early seventeenth century, the Baroque era began in Italy and quickly spread across most of Europe. Similar to the Baroque architectural style with its dramatic form and elaborate ornamentation, Baroque city planning manifested itself on a grand scale. Baroque cities had long axes running through them, creating sweeping vistas. Brown, Dixon, and Gillham credit the Baroque era as the period when the basic concepts of modern urban design were born, which include:

"...the idea of the street as a spatial element in its own right; the concept of purposely shaped and defined public space, networks of streets, and public spaces organized by visual foci; and the idea of deploying buildings with uniform facades to define streets and other public spaces."³¹

The Baroque era saw a marked growth in city populations, which eventually led to an overflow of the medieval street system's functional capacity. This condition required city builders to develop new methods to resolve the overload. These methods, which sought to better the city and relieve the disorder, introduced the concepts of public health and allowing more natural light, and fresh air into the urban environment.³²

Over the next three centuries, the basic concepts of modern urban design born during the Baroque era were applied in Europe and North America.. Washington DC, designed by engineer and architect Pierre-Charles L'Enfant, is an example of an American city influenced by Baroque city planning ideals. The plan combined a grid pattern with intersecting diagonal streets, a characteristic Baroque city design. Monumental public spaces or landmarks were situated at the convergence of the diagonal streets. Other Baroque city planning characteristics incorporated into the design include the organization of public streets and landscaped boulevards on axes; "radial and diagonal patterns defined by specific visual focal points; monumental public spaces; and uniform street walls."³³

³¹ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 33.

³² Ibid.

³³ Ibid., 34.

1.3 The Grid: Dividing and Distributing American Lands

Many American city designs were inspired, in form and organization, by the Miletian plan, more commonly known today as the grid pattern. Brown, Dixon, and Gillham offer an explanation for the use of this approach in American city planning:

"Both George Washington and Thomas Jefferson believed that grid geometry represented the democratic principles upon which the new nation was founded, a belief that reflected the fundamental role property played in the American idea of democracy."³⁴

Being property owners themselves, both Washington and Jefferson believed that owning real estate was an essential right of the American citizen. When the Declaration of Independence was signed, anyone who wished to vote had to be a landowner.

Brown, Dixon, and Gillham explain that, "...in part because having land seemed likely to assure economic freedom in an agrarian economy.... The new democracy encouraged widespread distribution of land."³⁵ The process Jefferson and Congress used for distributing lands in the American territory is also credited with influencing the grid pattern of American cities. Brown, Dixon, and Gillham describe this process:

"[Jefferson] proposed stretching a surveyor's grid of ten-mile squares across the nation's undivided territories; aligning each square with its neighbor's would assure that no land was left vacant.... When Congress passed the legislation for disbursing land, it altered Jefferson's original plan by creating 'townships of 6 miles square,' subdivided into thirty-six sections of one square mile each. The land was to be sold at public auction by section at a price of one dollar per acre, or \$640 per section—the smallest parcel that could be bought at the time."³⁶

Based on this process, Congressional surveyors began dividing and distributing American lands. The surveyors drew a rectilinear grid pattern across the American territory from the Appalachian Mountains to the Pacific Ocean, ignoring the topography and other natural features of the land. This grid pattern became the

³⁴ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 37.

³⁵ Ibid, 38.

³⁶ Ibid, 38-39.

basis for the division of American lands thereafter. With the power to divide and distribute lands in this manner in the hands of Congress, the grid pattern became a process that enforced power and control. Brown, Dixon, and Gillham write, "In the end, it could be said that the gridded cities of the United States were planned more for the real estate developer than for the designer or the democratic idealist."³⁷

1.3.1 The Grid Pattern Expanding American Cities

As American cities rapidly grew in the nineteenth century, the grid pattern became the preferred method for city expansion. The grid pattern was easy to understand and made record-keeping less complicated. Characteristics such as "...easily transferable space within a short span of time....[and] the developmental potential of repetition providing efficiency..." made this method of city building and expanding more appealing than other methods.³⁸ The disregard for topography and the land's natural features helped make building and expanding a city less complicated and more efficient. Another characteristic that made this approach appealing is described by Vikas Mehta in his book, *The Street: A Quintessential Social Public Space*. He quotes Leonardo Benevolo who wrote that "'when streets cross at right angles houses are less expensive to build and more convenient to live in.'"³⁹ The ease, efficiency, cost effectiveness, and potential for mass production of the grid pattern made it the most suitable method for city building in America as the nation moved into the era of the Industrial Revolution.

1.4 The Industrial Revolution: Transforming the Urban Fabric

The Industrial Revolution, which lasted through the 18th and 19th centuries, marked a historical turning point that drastically influenced the way cities were planned and built. As the Industrial Revolution's influence spread, European and American societies transformed from agrarian and rural to industrial and urban. Manufacturing, which had mostly taken place in homes where goods were made by hand using simple machines, shifted to factories where goods were mass produced

³⁷ Ibid, 39.

³⁸ Vikas Mehta. *The Street: A Quintessential Social Public Space* (New York: Routledge, 2013), 39-40.

³⁹ Ibid, 40.

using "powered, special-purpose machinery.... The iron and textile industries, along with the development of the steam engine, played central roles in the Industrial Revolution."⁴⁰

Although the Industrial Revolution began long before the American Civil War, it was not until after the American Civil War that this movement picked up momentum in American society. American manufacturers began to change their means of power from water to coal and steam. The transition away from waterpower meant factories no longer needed to be located near a water resource such a stream or river. The development of coal and steam power also effected a new means of transportation, the steam-powered train and the railroad. This new source of power combined with the expansion of railroads allowed factories to settle in any area with access to a railroad for coal deliveries for the factories and for the transportation of the goods manufactured by these factories.

As more factories were established the demand for labor increased. At this point in history, the largest labor pools were "...found in mercantile cities, where the markets for goods and the means of cross-oceanic transport were also close at hand."⁴¹ Soon, an increasing number of manufacturers were building their factories in these cities, which in turn drew more people searching for work. The great influx of factories and people forced these cities to transform, to expand and construct housing to accommodate these new residents who needed to live close to their places of work.⁴²

1.4.1 The Pre-Industrial City vs. The Industrial City

The Industrial Revolution set the stage for the emergence of a new city, the industrial city. As previously stated, the driving force that formed these industrial cities was the relatively rapid influx of factories and workers settling within their perimeters. The forces under which pre-industrial cities were formed, on the other hand, were quite different. The most influential included trading, agriculture, and a city's defensive strategy. Additional factors that determined the layout and size of

⁴⁰ HISTORY.com, "Industrial Revolution," *A&E Television Networks, LLC*, accessed February 2, 2016, <http://www.history.com/topics/industrial-revolution>.

⁴¹ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 41.

⁴² *Ibid*, 41.

city streets included the reasonable distance a person could walk, herds of animals passing through, and the use of carts and wagons.

The distance people could travel, either by foot or vehicle, prior to the Industrial Revolution, not only determined the form and size of a city, but also the proximity of residential and commercial developments. Since the distance people could travel in a day was limited, home and workplace were either in walking-distance of each other or combined in one place. According to Brown, Dixon, and Gillham, "because no one wanted to walk great distances, most land uses ended up as close neighbors.... The mix of residential and commercial uses often added to the liveliness, interest, and excitement of a city."⁴³ Mixed land uses had become a common characteristic of pre-industrial cities.

A major characteristic of the larger pre-industrial American cities was the location near the coast. Cities such as New York City, Savannah, and Charleston were mercantile cities; ships provided the major form of transport for the movement of marketable goods. Before the Industrial Revolution, societies depended on water as the main means of transporting goods over great distances.

The Industrial Revolution marked the end of the pre-industrial city. As discussed earlier, coal and steam power led to new industries and the capacity for mass production. Factories moved to mercantile cities in search of labor. A great percentage of Americans, who had previously lived in small, agrarian towns and engaged in various cottage industries or agriculture, migrated to these cities, drawn by the new work opportunities and higher factory wages. Soon, a greater number of people were living in cities than the countryside. The populations of industrial cities grew at a rapid rate, which attracted even more factories. Overcrowding soon became a serious concern for these budding cities.

In response to the growing city populations, masses of buildings were being quickly constructed. Pre-industrial city building heights were determined by how many flights of stairs a person could reasonably climb. The taller buildings were typically four stories with the exception of church steeples, which were the tallest buildings in a city's skyline. However, with the technological developments and mass production capabilities introduced during the Industrial Revolution, buildings could be

⁴³ Ibid.

built in a shorter amount of time and could be built with more floors. With the rapid influx of people, factories, and new buildings, it seemed like industrial cities changed overnight.⁴⁴

These changes led to the characteristics that came to define the industrial city. Mixed land use, as in pre-industrial cities, was characteristic of industrial cities where homes and factories were placed near each other. In his book, *The Street: A Quintessential Social Public Space*, Mehta quotes Lewis Mumford in "describing the new social urban order" who wrote, "'The main elements of the new urban complex were the factory, the railroad, and the slum.... The factory became the nucleus of the new urban organism. Every other detail of life was subordinate to it.'"⁴⁵ Here, Mumford describes the factory as being the center of industrial city life and the railroad as one of its major elements. The distances people could travel was no longer dictated by how far they could walk but by how far the railroad extended. The railroad and other new forms of transportation, both a result of and a major influencing factor in the developing industries, greatly determined the form and growth of these new cities.⁴⁶

1.4.2 Effects of New Modes of Transportation on the City

The railroad was just one form of new travel that resulted from the new industries. Streetcars and subways were additional modes of transportation introduced during the Industrial Revolution. Both of these played a major role in the new design of city streets as they also contributed to the horizontal expansion of the city.

⁴⁴ Ibid., 41-42.

⁴⁵ Vikas Mehta. *The Street: A Quintessential Social Public Space* (New York: Routledge, 2013), 40-41.

⁴⁶ Lance Jay Brown, David Dixon, and Oliver Gillham, *Urban Design for an Urban Century: Placemaking for People* (Hoboken: John Wiley & Sons, Inc., 2009), 42.

CHAPTER 2 | DEFINING PLACE

The term, "place," is a central concept in this project. To understand how a street can be transformed into a place, the definition of what a place is and how it is formed must first be delineated. Only then can the different street design methods for shaping space into place be examined.

2.1 The Difference Between Space and Place

Space and place are two common terms that are often used interchangeably. For the purpose of this project, however, it is important to distinguish the distinctions between the two. Understanding these differences is essential for identifying the terms' relationship to each other and for recognizing how one can lead to the other. This project assumes that the term place describes a location to which people feel connected and that it is the people themselves that transform space into place.

2.1.1 Space

The Merriam-Webster online dictionary defines "space" as follows:

- the amount of an area, room, surface, etc., that is empty or available for use;
- an area that is used or available for a specific purpose;
- an empty area between things.⁴⁷

Here, space is described as a quantity of empty or available area. The scholars Martin Heidegger, Mojtaba Parsaee, Mohammad Parva, Bagher Karimi, Irwin Altman, and Ervin Zube all offer alternative and expanded descriptions of the meaning of space.

⁴⁷ *Merriam-Webster's Collegiate Dictionary*, 11th ed., s.v. "Space," <http://www.merriam-webster.com/dictionary/space> (accessed April 28, 2015).

In his writing, "Building Dwelling Thinking," Martin Heidegger describes the conditions from which space is created: "[A] space is something that has been made room for, something that is cleared and free, namely, within a boundary."⁴⁸ He goes on to say that the boundary is not where something stops, but rather, "... *that from which something begins its essential unfolding*."⁴⁹ Heidegger states that space comes into being through locations, where locations are the result of things that provide or encompass space. In other words, space is the result of things that create locations.⁵⁰

So what are these "things" that create locations? According to Heidegger, "...building, by virtue of constructing locations, is a founding and joining of spaces. Because building produces locations, the joining of the spaces of these locations necessarily brings with it space."⁵¹ Essentially, Heidegger is stating that the things that create locations are buildings and the act of building creates locations. The spaces through which we pass on a daily basis exist because they are present in locations, where locations come into existence when building happens. Thus, according to Heidegger, first, building creates locations and then from these locations, space is created; therefore, the act of building is the creation of a collection of spaces.

Similarly, in their article, "Space and place concepts analysis based on semiology approach in residential architecture," authors Mojtaba Parsaee, Mohammad Parva, and Bagher Karimi write that space is "...created by a specific set of natural and artificial things whose architecture is involved in its creation."⁵² They go on to say that "the perception of space is only possible in the presence of the perceptible objects therefore space is the relation among objects."⁵³ In their

⁴⁸ Martin Heidegger, "Building Dwelling Thinking," in *Basic Writings*, ed. by David Farrell Krell, (New York: Harper & Row, Publishers, 1977), 332.

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Ibid., 336.

⁵² Mojtaba Parsaee, Mohammad Parva, and Bagher Karimi, "Space and place concepts analysis based on semiology approach in residential architecture," *HBRC Journal* (2014): 2, accessed December 8, 2014. doi: 10.1016/j.hbrj.2014.07.001.

⁵³ Ibid.

introduction to the book, *Public Places and Spaces*, editors Irwin Altman and Ervin Zube, define space as "...the abstract geographical qualities of environments"⁵⁴.

The description of space presented by Parsaee, Parva, and Karimi is comparable to Heidegger's in that building is an inherent part of how space is created. Parsaee, Parva, and Karimi add to this the idea that the awareness of objects brings space into existence. Altman and Zube's basic description of space is similar to Heidegger's in that location creates space. Each of these definitions bases the existence of space on a defined boundary and physical location.

For the purpose of this project, then:

Space is the area defined by established boundaries and location that is used for a specific purpose and is a result of the relationship between objects.

2.1.2 Place

The Merriam-Webster online dictionary defines "place" as follows:

- a specific area or region of the world: a particular city, country, etc.;
- a building or area that is used for a particular purpose;
- a building, part of a building, or area that is used for shelter.⁵⁵

Here, place is described as being an area or a building that serves a purpose or is used for shelter. These definitions describe place solely in a physical context, but there is more to a place than its physicality. Parsaee, Parva, and Karimi classify different scholars' definitions of place and list out characteristics derived from these, including the following two:

- "The place can be considered as a result of the interaction of three components: human behavior, concepts and physical characteristics."⁵⁶

⁵⁴ Irwin Altman and Ervin H. Zube, eds., "Introduction." *Public Places and Spaces*, *Human Behavior and Environment: Advances in Theory and Research* 10 (New York: Plenum Press, 1989), 2.

⁵⁵ *Merriam-Webster's Collegiate Dictionary*, 11th ed., s.v. "place," <http://www.merriam-webster.com/dictionary/place> (accessed March 3, 2015).

⁵⁶ Mojtaba Parsaee, Mohammad Parva, and Bagher Karimi, "Space and place concepts analysis based on semiology approach in residential architecture," *HBRC Journal* (2014): 2, accessed December 8, 2014. doi: 10.1016/j.hbrcj.2014.07.001.

- "The place is a combination of memory, sensory experiences and narratives."⁵⁷

In his article, "Modernity and Reclamation of Place," Edward Relph describes place as "...above all a territory of meanings. These meanings are created both by what one receives from and by what one gives to a particular environmental context, and they are not detachable and transferable...."⁵⁸

In their introduction to *Public Places and Spaces*, Altman and Zube discuss the connection between space and place: "'Space' and 'place' are related terms, with 'space' becoming 'place' as it gains psychological or symbolic meaning."⁵⁹ They go on to say that space transforms "...into meaningful places as people use, modify, or attribute symbolic value to specific settings."⁶⁰ In addition to their own theory of place, Altman and Zube discuss the views of two authors presented in the book, Jonathon Sime and Kim Dovey. Jonathon Sime, Altman and Zube write, explains his concept of place, writing, "'The term 'place,' as opposed to space, implies a strong emotional tie, temporary or more long lasting, between a person and a particular physical location.'"⁶¹ Similarly, Kim Dovey's idea of place is "'the interaction between people and a physical setting together with a set of meanings that both emerge from and inform this experience and interaction.'"⁶²

All definitions of place presented here describe it as having an environment or physical setting. However, the scholars' definitions are set apart from the Merriam-Webster definitions by the human element, which they agree is essential to the concept of place. Space turns into place when *people* interact with the physical environment. Through people's interactions with their environment and with each other, experiences, memories, and emotional ties to the physical environment are formed, which in turn gives meaning and purpose to that particular physical

⁵⁷ Ibid

⁵⁸ Relph, Edward, "Modernity and the Reclamation of Place," in *Dwelling, Seeing, Designing: Toward a Phenomenological Ecology*, edited by David Seamon, (Albany: State University of New York Press, 1993) 36.

⁵⁹ Irwin Altman and Ervin H. Zube, introduction to *Public Places and Spaces*, ed. Irwin Altman and Ervin H. Zube, vol. 10 of *Human Behavior and Environment: Advances in Theory and Research* (New York: Plenum Press, 1989), 2.

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Ibid.

environment. Thus, it is people that give meaning and purpose to place; the interaction of people within a space transforms that space into a place, and without people, the space would remain a space.

For the purpose of this project, then:

Place is a space defined by the interaction of people with the physical environment and with each other, where memories and meaning are created through experiences.

2.2 What Makes a Place Successful?

As stated in the previous section, space becomes a place when people interact with their physical environments; place is the physical environment that allows people to interact with their surroundings and with each other. By this definition of place, many spaces can become places, but the investigation for this project is to determine not only the definition of place but also why some places are more successful than others; specifically what makes a public place successful?

Project for Public Spaces (PPS) is a planning, design, and educational nonprofit organization that aims to help people create and maintain spaces to create stronger communities. In order to identify the qualities that make a place successful, PPS observed and evaluated many public places around the world. They concluded that there are four key qualities to successful places:

- Access and linkages: It is accessible and visible from afar.
- Uses and activities: People engage in activities there.
- Comfort and image: It is comfortable, clean, and aesthetically pleasing.
- Sociability: It fosters socializing.⁶³

⁶³ Project for Public Spaces, "What Makes a Successful Place?" *Project for Public Spaces*, <http://www.pps.org/reference/grplacefeat/> (Accessed March 11, 2015).

WHAT MAKES A PLACE?

KEY ATTRIBUTES (Red circle)
INTANGIBLES (Orange circle)
MEASUREMENTS (Light orange circle)

PLACE

SOCIABILITY

- NUMBER OF CHILDREN & ELDERLY
- LOCAL BUSINESS OWNERSHIP
- LAND-USE PATTERNS
- PROPERTY VALUES
- RENT LEVELS
- RETAIL SALES
- SUSTAINABLE
- CELEBRATORY
- INDIGENOUS
- USEFUL
- REAL
- SPECIAL
- VITAL
- ACTIVE
- FUN

USES & ACTIVITIES

ACCESS & LINKAGES

- WALKABLE
- CONVENIENT
- ACCESSIBLE
- PARKING USAGE PATTERNS
- PEDESTRIAN ACTIVITY
- TRANSIT USAGE
- MODE SPLITS
- TRAFFIC DATA
- CONTINUITY
- PROXIMITY
- CONNECTED
- READABLE
- WALKABLE
- CONVENIENT
- ACCESSIBLE

COMFORT & IMAGE

- SAFE
- CLEAN
- "GREEN"
- WALKABLE
- SITTABLE
- SANITATION RATING
- BUILDING CONDITIONS
- ENVIRONMENTAL DATA
- HISTORIC
- ATTRACTIVE
- CHARMING
- SPIRITUAL

PPS created the Place Diagram (see Figure 2) to help people evaluate the successfulness of a place in terms of these four key qualities. The Place Diagram is comprised of three rings encompassing a central circle representing the place being evaluated. The three outer rings are divided into four quadrants. The inner ring represents the four key qualities of a successful place while the two outer rings represent features used to measure each of the corresponding key qualities. The ring surrounding the four key qualities ring represents intuitive and qualitative features used for evaluating a place. In other words, this particular ring represents the intangible qualities that help to make a place successful. The outermost ring represents quantitative, measurable features of a place that can help determine its

successfulness. These features can be measured with research and statistics.⁶⁴ The following sections provide more information about each key quality and what this means in determining what makes great places.

2.2.1 Accessibility and Linkages

When determining the accessibility of a place, visual and physical connections to a place's surroundings are evaluated. According to PPS, a successful place "...is easy to get to and get through; it is visible both from a distance and up close."⁶⁵ The PPS Place Diagram suggests evaluating a number of aspects, including whether a place has continuity, proximity, connections, and readability. Is a place walkable, convenient, and accessible? Does the place contain pedestrian activity, provide transit use, and what are the parking options and patterns?⁶⁶

In general, places that have successful access and linkages will have high pedestrian activity, high parking turnovers, and are convenient to access via public transportation. According to PPS, in order to determine the level of accessibility of a place and how connected a place is to its surroundings, the following questions may be:

- Is a place visible from various distances?
- For building spaces, can the interior be seen from outside the building?
- Are spaces adjacent to buildings easily accessible and have good connections to the building, such as no surrounding blank walls dividing the space from the building?
- How often do building occupants use the space adjacent to their building?
- Are the spaces within this place easy to use by people with disabilities and special needs?
- Do the roads and paths within a place make it easy for people to get to their destinations?
- Is this place accessible by different modes of transportation (e.g., car, bus, train, bicycle)?⁶⁷

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Ibid.

2.2.2 Uses and Activities

According to PPS, "activities are the basic building blocks of a place."⁶⁸ Providing activities in a place, especially a number of different types of activities, offers a reason to come to the place. When people stay and interact in a place, this is an indication there is some kind of activity going on in the space. Activities within a place allow people to interact with each other and their physical environment, which in turn allows people to have meaningful experiences and create memories attached to the place. According to the Place Diagram, the quality of activities and uses in a place can be evaluated and measured by noting certain features and characteristics of the activities and uses of the place. Are the activities and uses fun, active, vital, special, real, useful, indigenous, celebratory, and/or sustainable? Is retail successful and consistent? Is there local business ownership? What are the property values, rent levels, and land-use patterns of the place?⁶⁹

Jan Gehl, architect and Professor of Urban Design at the School of Architecture, Royal Danish Academy of Fine Arts in Copenhagen, Denmark, also contends that a place's success can be measured by the activities and use of a space. In his book, *Life Between Buildings*, Gehl writes that,

...it is generally true that people and human activities attract other people.... They gather with and move about with others and seek to place themselves near others. New activities begin in the vicinity of events that are already in process.⁷⁰

Gehl argues that the main attraction of a place is human activity, which itself attracts the attention and interest of other people.⁷¹

PPS has developed six principles to help evaluate the success of a place in terms of activities and use. The place should:

- Provide numerous and varied activities, especially those that give people the opportunity to participate. This is ideal because it attracts even more people and gives a greater number of people options for enjoying their experience.

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Jan Ghel, *Life Between Buildings* (Washington: Island Press, 2011), 23.

⁷¹ Jan Ghel, *Life Between Buildings* (Washington: Island Press, 2011), 29.

- Provide activities that attract a good balance of men and women.
- Provide activities and uses that attract people of different ages. This brings diversity to the place, allowing different people to interact with each other.
- Provide spaces that attract both individual use and group use. This encourages greater social interaction.
- Provide activities that encourage use throughout the day.
- Be managed well, which is, according to PPS, "the ultimate determinant of a place's success."⁷²

2.2.3 Comfort and Image

According to PPS, a successful place is comfortable and presents a good image. This refers to the perceived safety of a place, its appearance, cleanliness, and access, and the availability of seating. The success of the comfort and image of a place can be evaluated and measured by identifying whether certain elements exist within the place. Is the place safe, clean, "green," walkable, sittable, spiritual, charming, attractive, and/or historic? Does it have a low crime rate? Finally, what are the conditions of the buildings and the environmental data of the place?⁷³

According to PPS, in order to determine the comfort level and good image of a place, the following questions and information should be considered:

- Does the place provide a good first impression?
- Is the number of women present greater than the number of men?
- Is there plenty of seating?
- Are the seats located in convenient places throughout?
- Is there seating in both the sun and the shade?
- Is the place clean and clear of trash?
- Who is responsible for maintaining the place?
- How is the place maintained and when?
- Does the place feel safe? Are there clear security measures in place?
- Are there security personnel? When are they on duty?

⁷² Project for Public Spaces, "What Makes a Successful Place?" *Project for Public Spaces*, <http://www.pps.org/reference/grplacefeat/> (Accessed March 11, 2015).

⁷³ Ibid.

- Is picture-taking allowed? Are there many photo opportunities?
- Is there a conflict between vehicle and pedestrian presence? Do cars obstruct human access?⁷⁴

Gehl also discusses the importance of comfort and image for a place's success. In *Life Between Buildings*, Gehl states that "the pleasantness of a place is partly contingent on protection from danger and physical harm, primarily protection from insecurity due to fear of criminality and vehicular traffic."⁷⁵ Gehl refers to Jane Jacobs' study of the activity level of a street as it relates to the street's level of safety to examine how people often feel safer in a crowd. He also points out that a lively street promotes "street watching" where people observe the activities on a street or place from their windows, which is a form of entertainment. This idea of street watching may also promote the security and safety of a place because the idea of possibly being watched may help to deter crime.⁷⁶

Gehl also discusses the necessity for a place to be safe from vehicular traffic. People generally avoid walking along a street if they feel threatened by the potentially dangerous vehicular traffic. This sense of danger can be caused by greater traffic flow speeds or the vehicles' proximity to the sidewalk. Gehl asserts that planners should consider not only the actual traffic safety, but also perceived sense of protection against the traffic.⁷⁷

Another element that creates a pleasant place, Gehl argues, is the place's ability to protect against unpleasant weather conditions.⁷⁸ This adds a level of comfort that allows more people to willingly come to a place and stay longer. In Hawai'i, the location of this project's site, protection from the sun and occasionally the wind and rain are important. Shading devices, trees, and vegetation, as well as rain screens, are all design elements that help to add a level of comfort to those spending time outside in Hawai'i.

Gehl's ideas, like PPS, also supports the notion that flexibility and varied seating options are important factors in determining the success of comfort in a

⁷⁴ Ibid.

⁷⁵ Jan Gehl, *Life Between Buildings* (Washington: Island Press, 2011), 171.

⁷⁶ Ibid.

⁷⁷ Ibid., 173.

⁷⁸ Ibid., 173-177.

place. Gehl states that the comfort of sitting conditions is dependent on the favorability of external conditions. With this in mind, more effort must be put into the placement of sitting locations than standing locations.

2.2.4 Sociability

The last key quality of a successful public place is its level of sociability. PPS notes that this quality is not easily achieved. According to the PPS website, "When people see friends, meet and greet their neighbors, and feel comfortable interacting with strangers, they tend to feel a stronger sense of place or attachment to their community—and to the place that fosters these types of social activities." The PPS Place Diagram, identifies aspects of sociability that can be measured and evaluated. Does the place show diversity, pride, and stewardship? Is it cooperative, neighborly, friendly, interactive, and welcoming? What does the street life look like? Are there evening activities? Is there an aspect of volunteerism and social networking? Do women, children and elderly people frequent the place?⁷⁹

According to PPS, in order to determine the sociability of a place, the following questions and information should be considered:

- Is this a place where a person would like meeting their friends?
- Do other people meet friends or run into them?
- Are there groups of people in this place and are they conversing?
- Do people recommend this place or bring friends and family members with them?
- Do people refer to parts of the place with pride?
- Do people smile and make eye contact with each other?
- Do people regularly use the place?
- Do people recognize each other by face or by name?
- Does the place allow for the "...mix[ing] of ages and ethnic groups that generally reflect the community at large?"⁸⁰

⁷⁹ Project for Public Spaces, "What Makes a Successful Place?," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/reference/grplacefeat/>.

⁸⁰ Ibid.

2.3 Placemaking

Now that we have established the definition of place and what makes one successful, we need to discuss how to create a place whose primary goal is to satisfy the people who occupy it. We will explore the practice of placemaking, here, based on its approach of prioritizing the people and their needs in the planning and design process.

What is "placemaking?" According to Lynda Schneekloth and Robert Shibley in *Placemaking: The Art and Practice of Building Communities*, the practice of "placemaking is the way all of us as human beings transform the places in which we find ourselves into places in which we live."⁸¹ Furthermore, "placemaking is not just about the relationship of people *to* their places; it also creates relationships *among* people in places."⁸² In the first chapter, Schneekloth and Shibley point out that part of making a public place is the involvement of the community: the people who inhabit the place and the people who are affected by the place. Community involvement is an integral part of making a change to a place because individuals in the community carry information about the place where they live and interact. This information may be the type of information that cannot be found in professional fields and thus brings a different layer of meaning and value to a place, one that is passed along via the people of the community who care most about the place.⁸³

Canadian geographer Edward Relph has a similar idea of placemaking. In his chapter of the book *Dwelling, Seeing, Designing: Toward a Phenomenological Ecology*, Relph maintains that in placemaking, the involvement of the community is central because "...in place design...the essential characteristics of place derive precisely from such involvement."⁸⁴ Therefore, one may conclude that community involvement and input in the place design process is a factor that is key to the success of a well-functioning public place.

⁸¹ Public Spaces, "What Makes a Successful Place?," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/reference/grplacefeat/.1>.

⁸² Ibid.

⁸³ Lynda H. Schneekloth and Robert G. Shibley, "Introduction: The Tasks of Placemaking Practice," in *Placemaking: The Art and Practice of Building Communities*, (New York: John Wiley & Sons, Inc., 1995), 5.

⁸⁴ Relph, Edward, "Modernity and the Reclamation of Place," in *Dwelling, Seeing, Designing: Toward a Phenomenological Ecology*, edited by David Seamon, (Albany: State University of New York Press, 1993) 34.

Likewise, PPS shares the idea that the designing of place should revolve around its local community. In the article "What is Placemaking?" PPS defines it as a process that focuses on ensuring public spaces are at the center of a community, which "strengthens the connection between people and the places they share."⁸⁵ In addition, "placemaking facilitates creative patterns of activities and connections (cultural, economic, social, ecological) that define a place and support its ongoing evolution."⁸⁶

All three views on placemaking presented in this section agree that the heart of making a place is the community of people who live in and experience the place. This also brings us back to the definition of place where interaction among people is necessary to turn a space into a place. In placemaking, interaction of people refers not only to the way people in a space interact with each other, but also to how the designers and placemakers interact with the people who live in or around this place. PPS and Schneekloth and Shibley emphasize this relationship between designer and community as essential to the placemaking process.

2.3.1 The Placemaking Process

PPS, in their article "What is Placemaking?," writes that "an effective Placemaking process capitalizes on a local community's assets, inspiration, and potential, ultimately creating good public spaces that promote people's health."⁸⁷ By capitalizing on the community's assets, a place can be created based off of what exists. This part of placemaking gives designers and planners a good starting point in creating a place; it essentially means, "Why not start with whatever is working well within the existing community?" When designers decide to understand the place they are designing for, the placemaking process suggests that they turn to the community and its assets, wants, needs, and inspirations. They essentially look to the community for the new vision of this existing place.

The first step in the placemaking process, then, is to open a conversation between the professionals and the people of the community, or as Schneekloth and

⁸⁵ Project for Public Spaces, "What is Placemaking?," *Project for Public Spaces*, accessed March 11, 2015, http://www.pps.org/reference/what_is_placemaking/.

⁸⁶ Ibid.

⁸⁷ Ibid.

Shibley write, a "dialogic space" must be created.⁸⁸ PPS calls this step: listening to "...the people who live, work and play in a place."⁸⁹ Ultimately, this conversation must be conducted in some form in order to understand how a place can transform to attract not just the visitors, but also the people of the community. PPS adds that "community input is essential to the Placemaking process, but so is an understanding of a particular place and of the ways that great places foster successful social networks and initiatives."⁹⁰ Therefore, placemaking means to understand the community and what makes the existing place special to the people who experience the place.

2.3.2 Eleven Key Principles of Placemaking

PPS developed a list of principles for placemaking that they called the Eleven Key Principles of Placemaking. These were developed to help professionals interact with people in the community. By following these guidelines, professionals can effectively connect with the community, helping people discover and clarify their opinions of the place as it is, then apply these opinions into a shared vision for what the place could be, and finally implement this shared vision.⁹¹ The following list defines these Eleven Key Principles of Placemaking:

1. *The community is the expert*

The first step is "...to identify the talents and assets within the community."⁹² Members of the community can give perspective and insight into the history of the place, how it functions, and the meaningful issues of the people in the community. PPS states doing this "...will help to create a sense of community ownership in the

⁸⁸ Lynda H. Schneekloth and Robert G. Shibley, "Introduction: The Tasks of Placemaking Practice," in *Placemaking: The Art and Practice of Building Communities*, (New York: John Wiley & Sons, Inc., 1995), 6-8.

⁸⁹ Project for Public Spaces, "What is Placemaking?," *Project for Public Spaces*, accessed March 11, 2015, http://www.pps.org/reference/what_is_placemaking/.

⁹⁰ Ibid.

⁹¹ Ibid.

⁹² Project for Public Spaces, "Eleven Principles for Creating Great Community Places," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/reference/11steps/>.

project that can be of great benefit to both the project sponsor and the community."⁹³

2. *Create a place, not a design*

This step emphasizes that it is the creation of a place that is the main goal—a goal that focuses on comfort and image, as well as viable settings for activities (key qualities that make a place successful). PPS asserts that physical elements must be introduced into a space in order to take this unused space and transform it into an essential place. These physical elements help to make people feel welcomed and more comfortable in a place. Physical elements, according to PPS, include seating and landscaping. Another aim PPS recommends is changing pedestrian circulation patterns and "...developing more effective relationships between the surrounding retail and the activities going on in the public spaces."⁹⁴

3. *Look for partners*

According to PPS, partners, such as local institutions, schools, museums, businesses, and others who may want to be involved in the creation of a public place, are crucial players in the future and success of the place. Bringing such partners into the initial brainstorming process of the project can help with the development of the project as well as provide funding to get the project started.⁹⁵

4. *You can see a lot just by observing*

Observation can be a powerful and important tool in the placemaking process. Just by observing the way people move through a space, how they use or do not use a space, or what they like and do not like about a space helps to determine what makes a space work or not. The observer can identify activities that work in a space and what kinds of activities are missing that could be beneficial to the place. After the

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Ibid.

places are designed and built, observations of how the place changes over time can also tell a lot about the place and the people who use it.⁹⁶

5. *Have a vision*

When designing a place, the designer must have a vision of what this place can be. Part of the process of creating this vision is to visualize what kinds of activities can happen in the spaces of the place. It is also important to visualize how the place can be comfortable, the image it can have, and what will make it into "...a place where people want to be. It should instill a sense of pride in the people who live and work in the surrounding area."⁹⁷

6. *Start with the petunias: lighter, quicker, cheaper*

It is important to start by implementing "...short term improvements that can be tested and refined over [the] years. Elements such as seating, outdoor cafes, public art, striping of crosswalks and pedestrian havens, community gardens and murals..." are all things that can be implemented temporarily.⁹⁸

7. *Triangulate*

PPS was founded based on the work of William Whyte. PPS defines triangulation using Whyte's words from his book, *The Social Life of Small Urban Spaces*: "Triangulation is the process by which some external stimulus provides a linkage between people and prompts strangers to talk to other strangers as if they knew each other."⁹⁹ Triangulation is activated when various elements are arranged in relation to each other. The elements and their uses are organized in a way that organically guides the user from one element to the next. By

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Ibid.

⁹⁹ Ibid.

implementing triangulation, people will be drawn to this place and engage in more activities.¹⁰⁰

8. *They always say "it can't be done"*

This principle is based on the idea that there is no professional position where the sole responsibility is to "create a place." It is not one discipline's job to create place; this responsibility extends to all design professionals including architects, urban designers, urban planners, traffic engineers, transit developers, and more.¹⁰¹ The inevitable obstacles that arise when placemaking can be overcome jointly; professionals and the people of the community can come together to overcome them.

9. *Form supports function*

While design is an important part of creating a place, it is elements such as community and partner input, understanding the function of spaces, experimental and temporary projects, and the overcoming obstacles, that inform designers of the "form" needed to implement the vision of the place.¹⁰²

10. *Money is not the issue*

Bringing in the community and partners at different stages of the project can reduce the total cost of the project. When people are involved in a project, they may gain a certain appreciation and excitement for the future of the project—a personal investment in the outcome—so that cost becomes a smaller obstacle when weighed against the benefits of the project.¹⁰³

11. *You are never finished*

Places are always changing and evolving. Implementing a complete design for a place does not necessarily mean it is completely finished.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

¹⁰² Ibid.

¹⁰³ Ibid.

A place needs to be maintained if it is going to be a place people are proud of and of course, over time the place will evolve as the people evolve. "Being open to the need for change and having the management flexibility to enact that change is what builds great public spaces and great cities and towns."¹⁰⁴

2.3.3 Notable Principles for Creating Streets as Places

After reviewing the Eleven Key Principles of Placemaking, some principles are more applicable than others to developing a design toolkit for transforming a street into a third place. The following seven principles, chosen from PPS's Eleven Key Principles of Placemaking, are the most useful for identifying pre-requisites and design tools for reshaping the street into a place:

- *The community is the expert*
- *Create a place, not a design*
- *Look for Partners*
- *You can see a lot just by observing*
- *Have a vision*
- *Start with the petunias: lighter, quicker, cheaper*
- *Triangulate*

For a space to be considered a place, people must interact with their physical environment and with each other. If the street is to be turned from a space for cars to a place for people, the community and professionals need to change their current view of the street and look at the street as an extension of the parking, sidewalks, and buildings that line the street.

By using the seven key principles of placemaking listed above as tools for identifying the existing assets of the community, place, and street, professional designers will develop a better understanding of the place they will be developing. Because place is about people connecting with the environment and with others, understanding the place through the eyes of the people of the community is a principle that can help to create a better connection between the people and the street. Emphasizing that the creation of a place is the primary goal over design is

¹⁰⁴ Ibid.

something that helps during the design process. We need to understand how a place can be comfortable and active and how physical elements in a space adds to levels of comfort. This principle will also encourage people to look for and create relationships between the physical elements and activities. Developing partnerships through the design and project process can lead to new ideas for changes and can help with project funding. However, having an overall vision of the street as a place is key. Envisioning the entire street as a place for people is a way to generate new ideas among the collaborating community and professionals, and once a vision is decided, temporary installations and experiments along the street as well as triangulation can begin with the support of the professionals, the community, and the partners.

CHAPTER 3 | THIRD PLACE

3.1 The Third Place Concept

Urban sociologist Ray Oldenburg classifies three types of places: the "first place" is one's home; the "second place" is one's workplace; and the "third place" is "...nothing more than informal public gathering places."¹⁰⁵ Today, it is normal for a person to go from home to work and then straight back home again.¹⁰⁶ Third places provide people with an escape from their home-work-home lifestyle pattern; they are public places where people visit and spend time with friends, neighbors, and coworkers.¹⁰⁷ Third places also act as neutral environments for meeting new people. Essentially, third places are places that promote and host socialization and support place attachment.¹⁰⁸

In his article, "Our Vanishing 'Third Places,'" Ray Oldenburg argues that third places are becoming increasingly important in today's society because of the general lack of venues at which people, especially neighbors, can meet and become acquainted. Despite the lack of these types of places, Oldenburg says, there are individuals who make efforts to meet and become acquainted with their neighbors, but in the end, struggle for results because of the non-encouraging available meeting environments. Third places are public places that counterbalance the private place that homes provide.¹⁰⁹

¹⁰⁵ Ray Oldenburg, "Our Vanishing 'Third Places'," *Planning Commissioners Journal* 25 (1996-1997): 6, accessed March 11, 2015, <http://illinois-online.org/krassa/ps410/Readings/Third%20Places/Oldenburg-Vanishing%20third%20places%201997.pdf>.

¹⁰⁶ Ibid., 7.

¹⁰⁷ Vikas Mehta and Jennifer K. Bosson, "Third Places and the Social Life of Streets," *Environment and Behavior* 42 (2010): 779, accessed March 15, 2015, doi: 10.1177/0013916509344677.

¹⁰⁸ Ibid.

¹⁰⁹ Ray Oldenburg, "Our Vanishing 'Third Places'," *Planning Commissioners Journal* 25 (1996-1997): 6, accessed March 11, 2015, <http://illinois-online.org/krassa/ps410/Readings/Third%20Places/Oldenburg-Vanishing%20third%20places%201997.pdf>.

3.2 The Value of Third Place in Communities

Third places have significant value to individuals and communities. Oldenburg identifies ten reasons third places are important; these reasons are outlined below:

1. *Third places help unify neighborhoods.*

As stated earlier, third places provide people with an informal public gathering place where they feel free to meet and get to know each other. By incorporating third places into a neighborhood environment, neighbors have the opportunity to come to a neutral spot to gather for informal meetings.¹¹⁰

2. *Third places serve as 'ports of entry.'*

Visitors and newcomers to the neighborhood can visit third places to obtain directions and other information regarding the neighborhood. In this respect, a third place can help new residents quickly familiarize themselves with the neighborhood, such as where points of interest are located and how the neighborhood functions.¹¹¹

3. *Third places are 'sorting' and staging areas.*

Third places act as neutral places where people with special interests can find each other. Acting in this capacity, third places can make space for all types of people to form small associations or even close friendships.¹¹² For example, musicians, literature lovers, and other types of enthusiasts can meet and introduce each other to other local outlets that encourage their interests.¹¹³

¹¹⁰ Ibid., 7.

¹¹¹ Ibid.

¹¹² Ray Oldenburg, "The Third Place: A Belated Concept," in *New Urbanism and Beyond: Designing Cities for the Future*, ed. Tigran Haas. (New York: Rizzoli International Publications, Inc., 2008), 235.

¹¹³ Ray Oldenburg, "Our Vanishing 'Third Places,'" *Planning Commissioners Journal* 25 (1997): 7, accessed March 11, 2015, <http://illinois-online.org/krassa/ps410/Readings/Third%20Places/Oldenburg-Vanishing%20third%20places%201997.pdf>.

4. *Third places can bring youth and adults into association with one another.*

During prewar times, children often chose to associate with adults and in return they would learn from these adults. Children and their parents also spent more time together during this period compared to today. The time parents and children spend together directly relates to the amount of time children spend with other adults in the community; as family time reduces, so do the places for family time as well as the interactions with other adults in the neighborhood.¹¹⁴ Every neighborhood should have places designed specifically for family gatherings where youth and adults can interact with each other. Not only does this allow for social interaction among all groups of people, but it also creates a diversity of people in the place that communicates that this third place belongs to all groups of people.

5. *Third places help care for the neighborhood.*

In some neighborhoods, certain people manage and operate third places. These people interact with their customers, clients, or neighbors and often seem to know everyone in the neighborhood. They are able to keep an eye on neighborhood kids and are also able to keep people up to date with local happenings. These people add to the charm and care of a neighborhood. Third places also help care for a neighborhood by providing gathering places during emergencies or disasters.¹¹⁵

6. *Third places foster political debate.*

Historically, third places have served as informal places for debate and discussion. Interacting face to face with other individuals is one way people can express and refine their opinions.¹¹⁶

¹¹⁴ Ibid., 7-8.

¹¹⁵ Ibid., 8.

¹¹⁶ Ibid.

7. *Third places help reduce the cost of living.*¹¹⁷

Third places allow for people to get to know each other and discover each other's interests and skill sets. As people get to know each other and enjoy each other's company, they gain a mutual trust over time for each other, which in turn leads to the creation of support groups. This type of mutual support among friends can lead to "business ventures contributing to the economic growth of the area."¹¹⁸

8. *Third places are entertaining.*

In third places, people provide the entertainment and sometimes an entertaining activity is the conversation itself.¹¹⁹

9. *Third places give the gift of friendship.*

Third places provide friends with a neutral place to gather. No one person has the obligation to host or to be a guest. People just enjoy each other's friendship in this neutral setting.¹²⁰

10. *Third places are important for retired people.*

These places provide the elderly a place to keep in touch with each other and a place for them to enjoy the community in which they live.¹²¹ These places encourage the elderly to retire where they have lived for years therefore leading to places where the young and the elderly can interact with each other.¹²²

¹¹⁷ Ibid.

¹¹⁸ Ray Oldenburg, "The Third Place: A Belated Concept," in *New Urbanism and Beyond: Designing Cities for the Future*, ed. Tigran Haas. (New York: Rizzoli International Publications, Inc., 2008), 235.

¹¹⁹ Ray Oldenburg, "Our Vanishing 'Third Places,'" *Planning Commissioners Journal* 25 (1997): 9, accessed March 11, 2015, <http://illinois-online.org/krassa/ps410/Readings/Third%20Places/Oldenburg-Vanishing%20third%20places%201997.pdf>.

¹²⁰ Ibid.

¹²¹ Ray Oldenburg, "The Third Place: A Belated Concept," in *New Urbanism and Beyond: Designing Cities for the Future*, ed. Tigran Haas. (New York: Rizzoli International Publications, Inc., 2008), 235.

¹²² Ray Oldenburg, "Our Vanishing 'Third Places,'" *Planning Commissioners Journal* 25 (1997): 9-10, accessed March 11, 2015, <http://illinois-online.org/krassa/ps410/Readings/Third%20Places/Oldenburg-Vanishing%20third%20places%201997.pdf>.

In "Our Vanishing 'Third Places'," Oldenburg writes that third places seem to be most effective when they are local and when they are in walking distance of the homes of the people in the neighborhood.¹²³ In another article, "The Third Place: A Belated Concept," Oldenburg writes that informal gathering places such as these third places have been decreasing as a result of zoning restrictions in residential areas.¹²⁴ Some zoning codes prevent the integration of third places, such as coffee shops and diners, in neighborhoods where people live.¹²⁵ Another reason for the decrease in third places is the replacement of locally owned establishments by chain establishments in commercial zoned areas. Oldenburg says that chain establishments

...operate on an impersonal, high volume, fast turnover basis. The chains thrive by killing off local independent establishments over which they have major advantages in advertising, in visibility to newcomers, and in being able to purchase consumables in volume at substantially reduced prices. As cloned establishments replace unique ones, the nation as a whole loses the variety of choices and experiences it once afforded its citizens.¹²⁶

This trend of chain establishments overtaking the local, independent establishments in an area has already begun to plague Kapahulu Avenue. Chain stores including Safeway, Jack In the Box, Papa John's Pizza, Taco Bell, Popeyes, Jamba Juice, and Starbucks are already present along the avenue.

3.3 Types of Third Places

Oldenburg describes what type of place is considered a "true" third place. In his article, "The Third Place: A Belated Concept," he states that in the past, third places were once taverns, candy shops, gambling saloons, and other places that

online.org/krassa/ps410/Readings/Third%20Places/Oldenburg-Vanishing%20third%20places%201997.pdf.

¹²³ Ibid., 10.

¹²⁴ Ray Oldenburg, "The Third Place: A Belated Concept," in *New Urbanism and Beyond: Designing Cities for the Future*, ed. Tigran Haas. (New York: Rizzoli International Publications, Inc., 2008), 235.

¹²⁵ Ray Oldenburg, "Our Vanishing 'Third Places,'" *Planning Commissioners Journal* 25 (1997): 10, accessed March 11, 2015, <http://illinois-online.org/krassa/ps410/Readings/Third%20Places/Oldenburg-Vanishing%20third%20places%201997.pdf>.

¹²⁶ Ray Oldenburg, "The Third Place: A Belated Concept," in *New Urbanism and Beyond: Designing Cities for the Future*, ed. Tigran Haas. (New York: Rizzoli International Publications, Inc., 2008), 235.

allowed people of earlier generations to gather in one place.¹²⁷ Today's third places, Oldenburg asserts, are coffee shops, libraries, dog parks, and possibly museums. All these third places are places where a mix of people from all generations and ethnicities can visit and gather. Another characteristic that sets aside third places from others is that people frequent these places, visiting more than once in a week; in fact, coffee shops, libraries, and dog parks are usually busy everyday at all times within their hours of operation.¹²⁸ People are free to meet each other and be involved in their own activities. A type of third place that Oldenburg does not mention, but which fits these characteristics, could be a community center. As long as the community center is open to multiple generations and provides activities for all the people in the community, a community center could also be a third place.

Oldenburg also points out what he considers to be pretend third places and focuses his argument on two main pretenders: "virtual" third places and workplaces. A "virtual" third place is developed by a community in the virtual world made available by computers and the World Wide Web. Previously, third place is defined as a public place where people are able to have informal gatherings and socialize with each other. Although a "virtual" third place does allow people to gather in a public place virtually, for a third place to be authentic, people must have face-to-face meetings, conversations, and gatherings in a physical public place.¹²⁹

The second third place pretender is the workplace. In reality, the workplace does not provide the same valuable benefits to a person, laid out in the previous section, that an actual third place provides. A workplace does not allow people of all generations to come together. A workplace also does not offer social support to those who are retired or unemployed, while an authentic third place does allow for this social support.¹³⁰ Overall, Oldenburg explains that third places are generally "...regularly-visited gathering places, more for the local population than for out-of-town visitors."¹³¹

¹²⁷ Ray Oldenburg, "The Third Place: A Belated Concept," in *New Urbanism and Beyond: Designing Cities for the Future*, ed. Tigran Haas. (New York: Rizzoli International Publications, Inc., 2008), 235.

¹²⁸ Ibid., 235-236.

¹²⁹ Ibid., 236-237.

¹³⁰ Ibid., 237.

¹³¹ Ibid., 236.

3.4 Physical Characteristics of Third Places

Building on Oldenburg's idea of third place, assistant professor of Urban Design and Architecture at University of South Florida Vikas Mehta and assistant professor of Social Psychology Jennifer Bosson wrote an article, "Third Places and the Social Life of Streets," whose purpose was to identify the "...physical qualities of third places that support sociability and place attachment."¹³² They discovered four physical characteristics that help to distinguish third places from other places along a main street and that "...support human use and social interaction, which are visible from the street...."¹³³ The four characteristics are: personalization, permeability, seating, and shelter. An important thing to note about these four characteristics is that they can be controlled by the owners of the businesses along the main street.¹³⁴

3.4.1 Personalization

Mehta and Bosson define personalization as "the act of modifying the physical environment and an expression of claiming territory, of caring for and nurturing the claimed territory."¹³⁵ Personalization of a space, such as a storefront, allows for the change of a familiar environment when specific needs and activity patterns change.

Benefits of personalization include: creating a sense of security along a street by making the space appear safer; defining the territory of the business; and allowing the business to apply its own aesthetic to the space. Personalization also "...provides stimulation and interest and creates a reason to stop and look, enabling possibilities that generate conversation and other social interactions."¹³⁶

3.4.2 Permeability

Permeability applies to the storefronts facing a street. It refers to the transparency of the store's façade. Mehta and Bosson explain that "permeable street fronts are those that actively reveal the interior to the exterior...."¹³⁷ This allows

¹³² Vikas Mehta and Jennifer K. Bosson, "Third Places and the Social Life of Streets," *Environment and Behavior* 42 (2010): 779, accessed March 15, 2015, doi: 10.1177/0013916509344677.

¹³³ Ibid., 780.

¹³⁴ Ibid.

¹³⁵ Ibid., 781.

¹³⁶ Ibid.

¹³⁷ Ibid.

passersby to see inside and immediately understand what activities are occurring there. Permeability also allows for the people passing by to "experience pleasure from characteristics of the edges of buildings that define the street, including shop windows and the displays and goods in them."¹³⁸

3.4.3 Seating

Mehta and Bosson agree with PPS and Gehl (whose ideas were discussed in the previous chapter) that seating and its flexibility in a space is central to the sociability of the street. Seating, especially when the elements are moveable, helps to keep people in a place longer. Movable seating gives people the choice and flexibility to adjust to a more comfortable setting according to the weather conditions—heat, sun, cold, wind, or rain.

In addition to allowing people to stay in a place longer, providing outdoor seating for the consumption of goods outside a store allows a business's activity to extend to the exterior, providing a stronger connection to the activity along the sidewalk and street. Eating and drinking are often associated with socialization; therefore, the combination of food, drink, and outdoor seating helps to create conditions that may extend visits to a place. This combination also supports the social life on the street; outdoor seating provides visibility of people engaged at an establishment, which in turn draws others to the establishment. This supports the idea that people are ultimately attracted to places where there are already people.¹³⁹

3.4.4 Shelter

The last physical characteristic Mehta and Bosson identify is shelter. They explain that although it is important for designers to orient the design of public spaces to maximize sunlight, it is also important to provide shelter and shade. Different shelter types include trees, awnings, canopies, and overhangs. Shelter provides shade and protection from the elements. Providing comfortable microclimate conditions, such as the right temperature, amount of sunlight, and amount of shade, helps to support outdoor activities.¹⁴⁰

¹³⁸ Ibid.

¹³⁹ Ibid, 782.

¹⁴⁰ Ibid.

CHAPTER 4 | STREETS AS PLACES FOR PEOPLE

The term "street" is often associated with public spaces dominated by vehicle movement. However, this project proposes that the street can be redefined and transformed into a third place. In the previous chapters, the terms space and place were defined and differentiated and the qualities that make up a successful place as well as the concept of third place were introduced. These concepts and aspects of place were discussed to develop a fundamental understanding of what it means for a place to be successful. Chapter four continues the discussion of place; this time, of streets as places for people.

This part of the project aims not only to examine the idea and movement of streets as places, but also to understand the origin of this idea through an exploration of the history of streets as places and how the street evolved away from being a social place toward being a space dominated by the movement of vehicles. Additionally, various qualities that make up a great street are presented in order to identify how a street can be transformed into an attractive, active destination for the people of a community. This chapter begins with a discussion of the problem with the state of the street today.

4.1 The Problem with the Street Today

In her article "Reimagining Our Streets as Places: From Transit Routes to Community Roots," Annah MacKenzie writes:

Streets are our most fundamental shared public spaces, but they are also one of the most contested and overlooked. Today...we have taken for granted the idea that our streets are primarily zones for cars, parking, and the transporting of goods.¹⁴¹

¹⁴¹ Annah MacKenzie, "Reimagining Our Streets as Places: From Transit Routes to Community Roots," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/blog/reimagining-our-streets-as-places-from-transit-routes-to-community-roots/>.

MacKenzie has identified the starting point for approaching the problem of today's perception of the street that no longer views it as a place, a result of decades of perceiving the car as the prime mode of transportation in America. This has, over time, shaped the focus of street design from catering to people's needs for social interaction, physical activity, and place attachment to catering to the car and its mobility needs.¹⁴² Cars have a large impact on the planning and designing of cities and streets. PPS, in "Streets as Places: How Transportation can Create a Sense of Community" asserts:

Traffic and road capacity are not the inevitable result of growth. They are the product of very deliberate choices that have been made to shape our communities around the private automobile.¹⁴³

The car-centric view of the street is not the only problem with the street today. Aside from traffic congestion and safety, the street is no longer idealized as a place. MacKenzie, in the following excerpt, lists a number of challenges connected to people's current relationship to the street and the built environment:

Reduced activity is a leading culprit of our current epidemics of obesity and chronic disease; lack of access to good places has led to widespread social isolation and depression (particularly amongst older populations); increased vehicle emissions have degraded air quality and contributed to the greenhouse gases causing climate change; and a lack of transportation options for many communities has caused uneven access to jobs, social services, healthy food options, and community interaction.¹⁴⁴

Changing the culture's perception of the street is one way to alleviate and even resolve many of these problems. This idea of changing the cultural view of the street is not a new one. The concept has been part of the driving force behind the *Streets as Places* movement.¹⁴⁵ Multiple organizations and professionals have worked together to redesign the street as a place in several locations around the world.

¹⁴² Ibid.

¹⁴³ Project for Public Spaces, "Streets as Places: How Transportation can Create a Sense of Community," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/reference/streets-as-places-how-transportation-can-create-a-sense-of-community/>.

¹⁴⁴ Annah MacKenzie, "Reimagining Our Streets as Places: From Transit Routes to Community Roots," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/blog/reimagining-our-streets-as-places-from-transit-routes-to-community-roots/>.

¹⁴⁵ Ibid.

The following section explores the history of streets that were not just spaces, but actual places for the local community.

4.2 Historic Beginnings of Streets as Places

The perception that the street is first a space for vehicles is a product of culture's general preference of the car as the primary means of transportation. However, the street was not always used this way. In truth, streets have been much more than this throughout history.

Looking back to the cities of the earliest civilizations (i.e., Mesopotamia, Indus Valley, Egypt, and China), streets have helped to develop settlement patterns and have influenced the formation of cities, as discussed in chapter one. Mehta, in *The Street: A Quintessential Social Public Space*, writes that cities have used streets to accomplish various motives, including those that are "...spiritual, religious, social, economic, health and aesthetic."¹⁴⁶ In some instances, the street layout was used to portray a city's cosmic connection, often based on the religious beliefs of the city's residents. In other instances, streets were used to designate zones differentiating the private realm (spaces for living) from the public realm (spaces for production, consumption, and leisure). Mehta continues:

Universally streets have been spaces that served the purpose of defining and directing movement, and facilitate[d] the exchange of goods. But most importantly, streets have been places par excellence for communication and social exchange.¹⁴⁷

Here, Mehta recognizes that throughout history the street has been a place where social interaction, communication, and orderly movement of vehicles and people has been central. Today, however, the balance of these three purposes is not frequently achieved.

How has the street evolved from a place where people socialize and gather into what it is today? The following sections explore points in history that demonstrate the early development of this evolution from a place to space. The following sections will also discuss the beginnings of the concept and the movement known today as Streets as Places.

¹⁴⁶ Vikas Mehta. *The Street: A Quintessential Social Public Space* (New York: Routledge, 2013), 28.

¹⁴⁷ Ibid.

4.2.1 The Street as a Social Place: Streets of Early Civilizations

One of the earliest recorded instances when a street was recognized as a public place for informal gathering was during the pre-Greco Roman era. Mehta explains:

[T]he Greek agora and subsequently the Roman forum and streets are the most recognized precursors and significant influences on medieval public open spaces of the Western world - the streets, squares and plazas - many of which have survived and are in use in present times.¹⁴⁸

The Greeks developed the agora as an open public space that could be used for various formal and informal activities, gatherings, and communication venue. Typically, specific buildings with diverse purposes were set around the agora. The stoa, a covered walkway with continuous colonnades that sometimes fronted these public buildings providing shelter for pedestrians, was developed in response to the agora. The stoa quickly turned into a "linear street market" as spaces and shops along the stoa were leased, and thus the stoa itself became a social place. In contrast to the Greek agora, the Roman forum was a much larger-scale public space.

The Roman forum was comprised of a combination of enclosed, semi-enclosed, and open spaces. Much like the agora, the Roman forum also served as a public space where religious, political, and commercial organized gatherings and activities could be held, as well as informal meetings and sports.¹⁴⁹

As these streets evolved to accommodate wheeled contraptions, it became necessary to designate space for pedestrians. These designated spaces are now known as sidewalks. According to Spiro Kostof, the first sidewalks appeared in central Anatolia (now, modern Turkey) around 2000 BC. Sidewalks then made their way to Greek and Roman cities where they aided pedestrians in navigating the city following building edges. The Greek and Roman cities, at first, were mainly pedestrian cities. In most Roman cities, wheeled traffic was prohibited from use during the day. This helped stress the importance of the pedestrian and held up the image of the street as a public place for the people. According to Mehta, in these early civilizations, "the street...became a legitimate public space and began to develop an identity as an

¹⁴⁸ Ibid.

¹⁴⁹ Ibid.

important open space for religious, commercial, political, leisure, communication and other social purposes." ¹⁵⁰

4.2.2 A Place for Multiple Purposes: Streets of the Middle Ages

During the Middle Ages, the street continued to evolve and became host for multiple functions. At this time in history, plazas and town squares were located at the center of a town. These spaces and other public open spaces were used for various religious, commercial, political, and communal activities. Streets during the Middle Ages became places of mixed uses, both private and public. Mehta, discussing this, quotes JB Jackson's who writes that the street was "'the place of work, the place of buying and selling, the place of meeting and negotiating, and the scene of the important religious and civic ceremonies and processions.'" ¹⁵¹

4.2.3 The Boulevard: Maintaining Street Life

During the Renaissance and Baroque eras, city planning continued to evolve. During this time, motives for city planning revolved around "...the visual expression, the appearance of buildings and city spaces, along with the efforts to find solutions for problems of defense, transportation and formal social functions..." ¹⁵² according to Mehta. In an effort to adapt to the greater social and economic changes occurring, the boulevard and avenue were adopted as central city design elements. During the Renaissance, street layout evolved away from the organic layout of Medieval towns to a more geometric form. This change was partly due to new demands created by an increase in wheeled traffic. In his book, Mehta quotes Kostof, who writes that the Renaissance streets "'were the primary channels of communication; they facilitated traffic and encouraged the exploration of a quarter.'" ¹⁵³

As city streetscapes continued to change, new inventions were developed to counteract the disorder inherent in this change. From the increase in traffic came the establishment of the first modern sidewalks, which were first used in London in the seventeenth century. Much like the sidewalks of early civilizations, these modern

¹⁵⁰ Ibid, 30.

¹⁵¹ Ibid, 32.

¹⁵² Ibid, 34.

¹⁵³ Ibid.

sidewalks were created to assign a space for the safe passage of pedestrians along the streets. Another invention was a glass-covered arcade, a form of public space, which in the end helped to retain the liveliness of the street and its social, commercial, and political functions. Although these creations aimed to organize the chaos of the new streets, they also contributed to a loss of street life, which ultimately caused these streets to fade as places for people.

While sidewalks and glass-arcades reduced street life, boulevards counteracted this and rather maintained and encouraged street life. The boulevard, a planning element characteristic of the Baroque era, provided a social gathering place free for of all social classes. In British and other European cities, the boulevard became a place where people could gather, mingle, and share their culture. The boulevard allowed the street to become a place for entertainment, a public stage for street concerts and performances as well as a place to pass along news. People strolling or enjoying time in open cafes could observe all the activities the street had to offer.

Even though streets of the Renaissance era lost their status as public places as they evolved to accommodate wheeled traffic, the introduction of the boulevard helped to maintain an active street life in many places in Europe. One might argue that the boulevard of this era became the first instance of a street specifically designated as a third place.

The following section examines how streets that were once places of social, formal, and informal gathering transformed into mere spaces for the movement of motor vehicle traffic.

4.2.4 Disapproving Streets as Social Places

Streets of early civilizations through the Renaissance and Baroque periods were designated as public places, but as time continued to move forward and technology progressed, new inventions were made, and again planning methods and city forms transformed. The Industrial Revolution brought about big changes in the planning, formation, and scale of cities. Rapid population growth along with the dark, airless streets where buildings were crowded together caused many new social and physical ills. To counteract these street conditions and improve the hygiene of the

city, social reformers and urbanists believed that incorporating nature (sunlight, fresh air, and open green spaces) into the city would help alleviate the problems. Streets, which during the Greek, Roman, and Renaissance eras had been active, social gathering places, had become dirty, airless spaces that bred social and physical ills.¹⁵⁴ Mehta quotes Kostof who describes how social reformers in Europe and America viewed streets during the Industrial Revolution:

Sociologically, reformers in Europe and the USA deplored the use of the street as a social space and 'spoke of breaking the 'street habit' as a critical aspect of rehabilitating the poor, and proposed the enclosed central courts of model tenements as alternatives to the animated sidewalks and front stoops where children played and their parents gossiped, laughed and fought.'¹⁵⁵

With this mindset, the image of the street as a place for people to gather and socialize was changing.

4.2.5 City Models Changing the Purpose of the Street

These Industrial era social reformers were not alone in wanting to change the purpose of the street. Sir Ebenezer Howard, a planner and founder of the Garden City Movement and author of *Garden Cities of Tomorrow*, envisioned cities that are built in harmony with nature, which he called Garden Cities. Mehta explains, "Howard wanted the Garden City to incorporate the advantages of the city without losing the connection with nature."¹⁵⁶ Howard also proposed to create a string of mixed-use communities within the Garden City. The city was divided into districts as a way of separating uses that seemed unrelated to each other. Garden Cities would include districts for employment centers, shopping, and residential neighborhoods. Parks and public open green spaces were included in addition to an agricultural land belt proposed to surround the city.

As the planning of the city changed, so did the planning of the streets. In the Garden City model, grand avenues lined with trees divided the residential and industrial zones. An arcaded space at the center of the city was designated for shopping and other commercial services. According to Mehta, the designation of separate residential districts led to the establishment of "low-density, quiet,

¹⁵⁴ Ibid, 41.

¹⁵⁵ Ibid.

¹⁵⁶ Ibid, 43.

residential-only streets"¹⁵⁷ in these areas. As the Garden City Movement spread, other planners and designers of this time developed other models of the Garden City. Mehta notes, however, that "in all these iterations of Howard's Garden City one thing was common - gone were the hustling, bustling, chaotic and energetic multiuse streets of the city."¹⁵⁸ The streets of the Garden City were no longer used as places for people, but instead were used as a design tool to separate districts. Streets were meant to support a single purpose within city life, as opposed to the multiuse streets of earlier cities.

Howard's model of the city was not the only one that designated the street as a space. Architect and urban planner Le Corbusier came up with several models of utopian cities, including the Contemporary City, the Plan Voisin, and the Radiant City. In these machine-age city models, drivers for the planning and organization of the city were order and speed. The street layout of Le Corbusier's ideal cities was a symmetrical, orthogonal grid. He established a hierarchy for the street network that included superhighways, bicycle paths, and pedestrian walkways. Mehta writes:

In Le Corbusier's new city the elaborate system of roads, including vehicular roads on grade to move within the city, an underground grid of roads servicing the buildings, and foremost, an elevated uninterrupted network of fast-moving highways akin to the modern-day highways, all came together as a multi-level interchange.¹⁵⁹

In Le Corbusier's model of the city, the street became a space for the movement of vehicular traffic. More specifically, roads were designed to maintain continuous movement within the city while separating pedestrians from the street via pedestrian walkways. In her article, MacKenzie writes that "Le Corbusier envisioned the urban street as a 'machine for producing traffic'..."¹⁶⁰ In discussing Le Corbusier's traffic congestion design solution, she writes,

Design streets solely around the car - eliminate pedestrians, wide boulevards, and sidewalk cafes altogether. Not only would this alleviate unwanted

¹⁵⁷ Vikas Mehta. *The Street: A Quintessential Social Public Space* (New York: Routledge, 2013), 43.

¹⁵⁸ Ibid, 44.

¹⁵⁹ Ibid, 44.

¹⁶⁰ Annah MacKenzie, "Reimagining Our Streets as Places: From Transit Routes to Community Roots," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/blog/reimagining-our-streets-as-places-from-transit-routes-to-community-roots/>.

congestion...but it would also reduce social ills such as crime and public revolt.¹⁶¹

Le Corbusier's model is yet another example of how designers and planners of the time worked to move pedestrian activity away from the street, designing it to cater specifically to the car.

Architect Frank Lloyd Wright also developed an ideal city model, which he called "Broadacre City" and presented in the book, *The Disappearing City*. While Howard and Le Corbusier sought to better the conditions of the city, Wright believed the city was obsolete. This idea stemmed from his belief that gathering places for social and economic exchange were no longer a necessary aspect of social life because of the increasing popularity of the automobile and mass communication systems. Wright's Broadacre City was one of decentralization. In his city model, Wright created an open plan with no boundaries where the urban and rural could not be distinguished from one another. In his city, one-acre plots of land would be designated for each family; these would be the only safe pedestrian places for people within a city. To get to other nodes within the city, including places for education, shopping, religion, health, and community, people would need an automobile. Mehta explained the street network design:

In Wright's city, where everyone had access to the automobile, the streets would exist as a hierarchical system of highways based on their location and the number of destinations they served.¹⁶²

Like the streets in Le Corbusier's utopian cities, Wright's Broadacre City street network was also based on a hierarchy where automobiles were assumed to be the dominant use of transportation. In this model, the street was a space solely for the automobile.

While none of these city models came into existence, the ideas behind them influenced the planning of actual cities. Howard's Garden City and Wright's Broadacre City both influenced the separation of the suburbs from the city and the attempts to incorporate nature for the benefit of the people. Traits of Le Corbusier's city models

¹⁶¹ Ibid.

¹⁶² Vikas Mehta. *The Street: A Quintessential Social Public Space* (New York: Routledge, 2013), 46.

can be seen in different aspects of modern cities today such as building massing and high-density blocks. Most importantly, modern cities have realized Le Corbusier's idea of a hierarchical street where the network of pedestrian safe footpaths are separated from the fast-paced, dominant automobile streets.¹⁶³ This separation can be seen in street design today in the form of sidewalks and streets. What all of these models have in common, is that streets should have one primary use: to provide moving space for fast-paced automobiles.

4.2.6 Place Reverts Back to Space

Streets of North American cities in the 1920s, especially in downtown districts, were once places full of life and activity. Unfortunately, the buildup of traffic congestion, noise, and pollution left the streets unsuitable as social places. It was during the Postwar era that drastic changes were made in European and American city landscapes that finally transformed the street from a place into a space. In America, two programs contributed to these drastic changes: the federal highway program and urban renewal. These programs also introduced the image of the modern cities of today: high rises and towering buildings surrounded by street networks with arteries that lead to highways and freeways that either connect to other parts of the city, or connect to suburban and residential neighborhoods. Both programs led to the demolition of large areas of blighted neighborhoods within the city replacing them with high rises.

In America, the levels traffic congestion experienced after World War II led to the largest public works project in its history: the building of the interstate highway system. This project took on the expansion of the national road systems. In 1956, the Interstate Highway Act was passed and as a result, a network of 42,500 miles of high-speed, limited access highways were built, connecting cities from the west coast to the east coast.¹⁶⁴ Not only did it connect cities, but it also connected places of work to places of residence that had previously been disconnected from the city, such as the suburbs. The building of the interstate highway network gave streets a

¹⁶³ Ibid, 47-48.

¹⁶⁴ Annah MacKenzie, "Reimagining Our Streets as Places: From Transit Routes to Community Roots," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/blog/reimagining-our-streets-as-places-from-transit-routes-to-community-roots/>.

new meaning and a new image as a moving space for vehicles. To people, streets became associated with fast-moving cars and highways. Mehta discusses this time:

Streets were no longer spaces for walking or gathering...in Europe and the USA, the street was transformed from a public space of everyday use—a socially meaningful space that was central to people's lives—to a space used merely for the movement of vehicles.... The street was now a conduit of rapid circulation to be used solely as a means of getting to and from places of living, production, learning and leisure.¹⁶⁵

With the building of the interstate highway network and the urban renewal movement, the image of the street as a place was quickly fading into an image of the past. Thus, the image of the street as a space for the movement of vehicles was born.

4.3 A Different way of Thinking About the Street

Today, people have begun to again conceive of the street as a place for people. As touched on earlier in this chapter, certain issues related to designing streets as spaces plague society today. According to MacKenzie, our society now has "a few isolated great places linked by car-dominated streets, placeless sprawl, poor physical health, social isolation, and disinvested low-income communities."¹⁶⁶ To improve these conditions and turn streets into lively, healthy, and social gathering places for people, a change in people's perception, thinking, and designing of the street must occur. The street must be thought of as a place for people first, instead of viewing it as a public space for vehicle movement. People need to start thinking about the potential opportunities and possibilities a street has for becoming great places that can serve the local community.

The *Streets as Places* movement uses a strategy that integrates planning, design, and the management of public spaces to encourage people to view the street as a whole, to see the possibilities of the multiple uses of the street. This movement

¹⁶⁵ Vikas Mehta. *The Street: A Quintessential Social Public Space* (New York: Routledge, 2013), 48-49.

¹⁶⁶ Annah MacKenzie, "Reimagining Our Streets as Places: From Transit Routes to Community Roots," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/blog/reimagining-our-streets-as-places-from-transit-routes-to-community-roots/>.

introduces people to the idea that streets can be more than what they seem: "not just their function in transporting people and goods, but the vital role they play in animating the social and economic life of communities,"¹⁶⁷ according to MacKenzie. In addition to this, MacKenzie writes, the movement is "...not a streetscape design, it's a *process* - it's about communities owning and reclaiming their streets, participating in civic life, and having a direct impact on how their public spaces look, function, and feel."¹⁶⁸ Today, several alliances, coalitions, and programs are dedicated to improving streets and helping communities transform their streets not just into places, but into destinations. Among these are Complete Streets, the Main Street Program, Smart Growth, and transportation initiatives such as road diets, Rightsizing Streets, woonerfs, and the Shared Space concept. Several of these will be discussed in more detail in chapter six.

While this idea of reclaiming streets as places for people that aims to bring life back to the street is positive, the new street design movements must also continue to serve the needs of motor vehicle movement. The streets must continue to give priority to the appropriate modes of transportation. For this project, it is important to not only envision the street as a place for the local community, but also to remember that Kapahulu Avenue is a major connecting transportation artery. Kapahulu Avenue is a bustling thoroughfare connecting Waikiki to Kaimuki and the H-1 Freeway. While the purpose of this project is to redefine Kapahulu Avenue as a third place for the people of the local community, it is also necessary to ensure that cars may continue to successfully inhabit the street.

¹⁶⁷ Ibid.

¹⁶⁸ Ibid.

4.4 Ten Qualities of a Great Street

Perceiving streets as places provides opportunities to create livable, walkable, and potentially social environments for everyday users. According to the PPS article "Streets as Places: How Transportation can Create a Sense of Community,"

...the rediscovered importance of walking and 'alternative transportation modes' will bring more people out onto the streets—allowing these spaces to serve as public forums where neighbors and friends can connect with one another.¹⁶⁹

In addition, MacKenzie writes that

...for streets to truly function as public places, they have to do more than allowing people to safely walk or bike through them. When streets are great places, they encourage people to linger, to socialize, and to truly experience the unique culture and character of a particular street.¹⁷⁰

In both discussions above, the authors write that in order for streets to become places, they need to provide opportunities or venues in which people can gather, socialize, and interact with the physical environment and the people around them.

As an organization that promotes the idea of streets as places, PPS recognizes the potential that streets have for becoming places. PPS compiled a list of qualities that great streets possess. The following list, taken from their website, lists and describes PPS's ten qualities of a great street:

1. *Attractions & Destinations*

Making a place an attraction or destination provides a reason for people to return and helps to avoid creating empty spaces. A key to creating a successful attraction and destination is to offer a wide range of activities suited for a variety of users including men and women, people of all ages, and groups of people. In addition, the activities

¹⁶⁹ Project for Public Spaces, "Streets as Places: How Transportation can Create a Sense of Community," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/reference/streets-as-places-how-transportation-can-create-a-sense-of-community/>.

¹⁷⁰ Annah MacKenzie, "Reimagining Our Streets as Places: From Transit Routes to Community Roots," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/blog/reimagining-our-streets-as-places-from-transit-routes-to-community-roots/>.

should be offered during "...different times of [the] day, week and year."¹⁷¹ PPS also recommends "creat[ing] an enticing path by linking together this variety of experiences."¹⁷²

2. *Identity & Image*

A place is successful when it has a good image and identity. In order for this to happen, a place must sustain its cleanliness and maintenance. "Fostering a sense of identity [is also key to the success of a place]. This identity can originate in showcasing local assets,"¹⁷³ according to PPS.

3. *Active Edge Uses*

This quality suggests that buildings along the street should have bases that are at a human-scale and that, most importantly, provide for interaction between the interior and exterior at the ground floor that borders the street. PPS states that "...active ground floor uses...create valuable experiences along a street for both pedestrians and motorists."¹⁷⁴ These active ground floors help to create sidewalk activity by drawing people to the buildings and more activity on the sidewalks generally slows vehicular traffic. PPS also suggests that "at the very minimum, the edge connection should be visual, allowing passers-by to enjoy the activity and aesthetics of the indoor space. These edge uses should be active year-round and unite both sides of the street."¹⁷⁵

¹⁷¹ Project for Public Spaces, "Streets as Places: How Transportation can Create a Sense of Community," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/reference/streets-as-places-how-transportation-can-create-a-sense-of-community/>.

¹⁷² Ibid.

¹⁷³ Ibid.

¹⁷⁴ Ibid.

¹⁷⁵ Ibid.

4. *Amenities*

Another key to a successful street lies in providing amenities that support a number activities. Grouping amenities together helps to ensure their use. Amenities such as street lighting, trash cans, bicycle racks, and seating options all help to enhance a place.¹⁷⁶

5. *Management*

Managing places along the street is vital to the success of the street as a place. According to PPS, managing a place involves not only keeping the place clean and safe, "...but also managing tenants and programming the [place] to generate daily activity. Events can [be]...small street performances to sidewalk sales to cultural, civic or seasonal celebrations."¹⁷⁷

6. *Seasonal Strategies*

In order to attract people to a place, the street needs to provide activities for people all year. PPS suggests "utiliz[ing] seasonal strategies, like holiday markets, parades and recreational activities to activate the street during all times of the year."¹⁷⁸

7. *Diverse User Groups*

To make a place welcoming to all users, activities for various groups of people must be provided. A successful place accommodates all types of people, such as those in all categories of race, gender, age, and income level. A place that allows for all types of people to interact helps to avoid the dominance of one type of user group in the place, which in turn can make a place feel unwelcoming to other users.¹⁷⁹

¹⁷⁶ Ibid.

¹⁷⁷ Ibid.

¹⁷⁸ Ibid.

¹⁷⁹ Ibid.

8. *Traffic, Transit & the Pedestrian*

Accessibility is another key to a successful street as a place (refer to chapter 2.2.1 for more details). The ease of getting to and through a street is important in attracting people. High parking turnover, convenient locations for public transit, and supportive bicycle and pedestrian facilities are all key characteristics of a street's success as an accessible place. Streets that are also visible at close and far range and planned to be linked to nearby destinations are also characteristics that help make a great street. According to PPS, "automobile traffic cannot dominate the space and preclude the comfort of other modes. This is generally accomplished by slowing speeds and sharing street space with a range of transportation options."¹⁸⁰

9. *Blending of Uses and Modes*

At the ground floor level, building uses and retail activities should overflow into the sidewalk and street to create an image of a shared space. As a result, the difference between private and public space is distorted, thus creating a shared space. According to PPS, this merging of spaces also conveys "...that no one mode of transportation dominates."¹⁸¹

10. *Neighborhood Preservation*

According to PPS, this quality of a great street does the following:

Great streets support the context around them. There should be clear transitions from commercial streets to nearby residential neighborhoods, communicating a change in surroundings with a concomitant change in street character.¹⁸²

¹⁸⁰ Ibid.

¹⁸¹ Ibid.

¹⁸² Ibid.

4.4.1 Notable Qualities for Creating Streets as Places

After reviewing the ten qualities of a great street, certain qualities appear to be more applicable than others in developing a design toolkit for transforming a street into a third place. The following five qualities, chosen from PPS's Ten Qualities of a Great Street, are determined to be the most useful for identifying pre-requisites and design tools for reshaping the street into a place:

- *Attractions & Destinations*
- *Active Edge Uses*
- *Amenities*
- *Blending of Uses and Modes*
- *Neighborhood Preservation*

PART II | THE RESEARCH

CHAPTER 5 | RESEARCH DESIGN

5.1 Research Methodology

This project is a design research project that utilizes three methods of research: historical research, qualitative research, and case studies. Chapters one through four, six, and seven detail the historical and qualitative research findings and chapter eight presents the case studies of different street design guidelines. This research forms the basis for a design process and a design toolkit developed for Kapahulu Avenue, which is also then applied in conceptual designs of one of three potential sites along Kapahulu Avenue. The project's design aspect is present in chapters nine through eleven.

5.1.1 Historical Research

Chapters one and four documents this project's historical research. The first part of the research focuses on the development of the American city and the events that led to the evolution of the street from a potential place suitable for people to a space mostly associated with motor vehicles. The second part of the historical research focuses on the Kapahulu neighborhood area, the site of the design aspect of this project. A brief explanation of Kapahulu's history is presented in chapter nine.

5.1.2 Qualitative Research

Chapters two through four, six, and seven present the qualitative research. Chapter two defines the terms "space" and "place" and discusses the distinctions between them, delineates the key qualities that make a place successful, and discusses the idea of placemaking. Chapter three introduces the "third place" concept. Understanding the meanings of "place" and "third place" are critical to the design aspect of this project, in which a design toolkit for Kapahulu Avenue is assembled that can help redefine the street from a space to a place. Chapter four focuses on the concept of streets as places. This chapter, chapter five, explains the research design and methodologies used in this project.

Chapters six discusses selected existing street design methods, chosen based on their relevance to existing conditions on Kapahulu Avenue, and chapter seven details existing plans for Kapahulu Avenue. These chapters present current methods and existing plans that aim to transform the street into something more than a space for cars.

Upon completing the review and analysis of existing knowledge and street design methods and plans, key principles and qualities that make up a successful place are taken into consideration for the development of the design toolkit. These findings contribute to the analysis of Kapahulu Avenue (primarily the section between the Board of Water Supply's Kaimuki Pumping Station and the Waikiki-Kapahulu Fire Station) as a whole and to the selection of one location along this street that has the potential of becoming a third place.

5.1.3 Case Studies

Case studies is the third research method used in this design research project. Since the chief goal of this project is to create a design toolkit for Kapahulu Avenue, the case studies analyze design guidelines affecting street design. Five design guidelines from the San Francisco Bay Area were chosen for this study. One reason the guidelines are exclusively from this area is because of the San Francisco Bay Area's many unique street designs and distinctive, eclectic neighborhood compositions that have similar residential and commercial qualities to Kapahulu Avenue. Another reason is that the author was studying in the Bay Area at the time she conducted the case studies.

Each of the five case studies chosen differ from each other and therefore address different street design methods and different methods of structuring guidelines and toolkits. Using a structured analysis explained in chapter eight, design processes and methods and document structures can be compared and analyzed to understand how these design guidelines help to transform the street from a space into a place.

5.1.4 The Design Toolkit and The Designed Sites

Based on the collected research, a design process, discussed in chapter nine, is developed to aid in the creation of a design toolkit for Kapahulu Avenue in order to redefine this street as a third place. Chapter ten details the design toolkit and, based on a whole-street site analysis, discusses the three locations along Kapahulu Avenue that were selected along with their potential for becoming connecting third places. One of these chosen sites was selected for its potential to apply most of the tools in the design toolkit and then conceptually designed to demonstrate how a space along the street can be developed into a place for the people. This conceptual design is reviewed in chapter eleven.

CHAPTER 6 | SELECTED EXISTING STREET DESIGN METHODS

In the previous chapters, the definition of place, what makes a place successful, and the concept behind the transformation of streets into places for people were presented. The scope of this project also requires a study of current methods of street design in order to understand the design process of the physical street and its design elements. While many current methods of street design exist, this chapter presents three methods selected based on their goal of designing streets into more suitable environments for people. These methods were also selected because of their relevance to the commercial street conditions of Kapahulu Avenue. The three existing street design methods are: Shared Spaces, The Main Street Program, and Complete Streets.

Each of the three methods is analyzed and presented here in a structured manner. Each method's purpose, goals, benefits, and principles or guidelines are reviewed. The information gathered helped to determine whether the method can be applicable to the design of the toolkit for transforming Kapahulu Avenue into a place.

6.1 Method # 1: Shared Space

According to Gary Toth, Senior Director of Transportation Initiatives for PPS, "Shared Space is more of a way of thinking than it is a design concept.... It is...a street space where all traffic control devices such as signals and stop signs, all markings such as crosswalks, and all signing have been removed."¹⁸³ The philosophy is that since the space lacks the traditional markings of a street, all users of the space, including pedestrians, bicyclists, and drivers, will move through the area cautiously and remain aware of their surroundings. Shared Spaces force all users to negotiate movement through the space through eye contact with each other and person-to-person. In Shared Spaces, all modes of transportation are equal.¹⁸⁴

Dutch traffic engineer Hans Monderman first established the idea of Shared Space. He believed that traditional streets set out defined spaces for each set of users; pedestrians are generally restricted to sidewalks and cars to the lanes on the street. Toth argues that this allocation of the street spaces creates "...a false sense of security to each user leading them to behave as if they have no responsibility to look out for others in 'their' space."¹⁸⁵ By removing traditional street markings and curbs so that the entire space is leveled, the people on the street may stop looking for signs and instead focus their attention on the activity that is taking place on the street. Here people would have to develop ways to communicate with each other, such through as eye contact and body gestures, in order to negotiate their movement through the space with other users. Currently Shared Spaces are mostly applied in Europe; however, there are some places in the US that use this type of street design method.¹⁸⁶

Toth shares some notable cautions about applying Shared Spaces as a street design method. First, the "...creation of Shared Space is a political process, not an engineering process." Sometimes a perfect plan for a Shared Space, where the space is most functional, needs to be reworked in order for a working Shared Space to meet the demands and needs of all people involved in the design process. Second,

¹⁸³ Gary Toth, "Where the Sidewalk Doesn't End: What Shared Space has to Share," *Project for Public Spaces*, accessed March 11, 2015, <http://www.pps.org/reference/shared-space/>.

¹⁸⁴ Ibid.

¹⁸⁵ Ibid.

¹⁸⁶ Ibid.

both pedestrians and business owners have concerns about cars parking too close to the shops. This concern brings up the safety and security issues involved in the Shared Space method. Lastly, although negotiation of movement through Shared Spaces creates opportunities for person-to-person interaction, this type of negotiation also requires more effort from all users moving through the space.¹⁸⁷

6.1.1 Goals of Shared Spaces

As previously stated, in Shared Spaces all modes of transportation are equal. One of the goals of Shared Spaces is to encourage human interaction and engagement as people move through their physical surroundings. Another goal is to create a relationship between the buildings fronting the street and the street itself.

6.1.2 Benefits of Shared Spaces

There are a number of benefits from creating Shared Spaces. The following is a list of these:

1. *Encourage Social Interaction*

The way people have to negotiate their movement through the street creates opportunities for social interactions with other users of the space.¹⁸⁸

2. *"...[E]mpowers individuals to take responsibility for their own behavior."*¹⁸⁹

3. *Does not completely rule out cars*

Cars still play a role in Shared Space. According to Toth, Shared Space "...acknowledges that there is a role for the larger-meshed fast network, which is needed to support the fine-meshed slow network. The key point is that on the slow network motor traffic is welcomed as

¹⁸⁷ Ibid.

¹⁸⁸ Ibid.

¹⁸⁹ Ibid.

a guest, but has to adapt to certain social norms of behavior. The layout of the road must make this clear."¹⁹⁰

4. *Creates less street accidents*

Because of the forms of communication necessary for navigation through a Shared Space, all users are more alert and take additional precautions with their actions. This type of communication requires more eye contact between the space's users, which encourages better decision-making and leads to less street accidents.¹⁹¹

6.1.3 Characteristics of Shared Spaces

Toth, in his article "Where the Sidewalk Doesn't End: What Shared Space has to Share," lists a variety of characteristics of Shared Spaces, including:

1. *Removal of traditional street markings, signage, and traffic lights*

Street markings are removed, blurring the boundaries between the street and the sidewalk. Street markings and signage include lane markers, parking space markers, stop signs, one way signs, and so on.¹⁹²

2. *Removal of the Curb and leveling of the space*

The curbing of a street is removed in order to level the Shared Space. This removes the distinction between sidewalk space and street space.¹⁹³

3. *Use of pavement material that differs from the traditional street*¹⁹⁴

4. *Reduction of speed limit to a slow speed*¹⁹⁵

¹⁹⁰ Ibid.

¹⁹¹ Ibid.

¹⁹² Ibid.

¹⁹³ Ibid.

¹⁹⁴ Ibid.

¹⁹⁵ Ibid.

6.1.4 Application Recommendation of the Shared Space Method for Kapahulu Avenue

The Shared Space method was selected for this study for its exploration and realization of the concept of sharing the street equally between all users: pedestrians, bicyclists, and motorists. While a goal of this project is to redesign a section of Kapahulu Avenue to create a third place for the people of the Kapahulu community, the Shared Space method may prove to be too radical of a change for this particular street. Although this method provides more opportunities for social interaction along the street and creates a setting in which many activities can take place at once, the existing conditions of Kapahulu Avenue do not allow for a Shared Space method to be applied without restraint.

Currently, Kapahulu Avenue is classified as an urban minor arterial street and acts as a major thoroughfare into Waikiki. The volume of traffic is heavy at different times of the day. During these times, Kapahulu Avenue needs to function as a street where cars can move at higher speeds. Because the Shared Space method equalizes all users of the street, many cars are deterred from traveling down the street in order to avoid the stress of heavy pedestrian and bicycle activity. In addition, Kapahulu Avenue is a wider street than most streets that use the Shared Space method. Resistance from political officials and some people in the neighborhood also presents problems for the application of the Shared Space method. Because Kapahulu Avenue needs to facilitate the movement of cars into and out of Waikiki and has patterns of heavy traffic, the application of the Shared Space method here is not recommended and will, therefore, not be explored further as a potential street design method in this project.

6.2 Method #2: The Main Street Program

The second street design method considered for this project is the Main Street Program. Overseen by the National Main Street Center, a subsidiary of the National Trust for Historic Preservation, the Main Street program is a preservation-based economic development tool that helps local communities to leverage their district's local assets, whether these are cultural or architectural heritage, local enterprises, or community pride.¹⁹⁶ In 1977, the National Trust for Historic Preservation initiated the main Street Project as a response to "...continuing threats to traditional commercial architecture in economically declining downtowns across America."¹⁹⁷ Initially, the Main Street Project was a three-year demonstration project where the main goals were to identify factors contributing to the declining health of downtowns and to "...develop a comprehensive revitalization strategy to save historic commercial buildings."¹⁹⁸ Because of the Main Street Project's success, the National Trust for Historic Preservation established the National Main Street Center (NMSC) in 1980 and initiated a second demonstration project.¹⁹⁹ The success of the second demonstration project led to the initiation of state Main Street Programs where state coordinators are hired for each state in which this program is active. Through the state Main Street Programs, communities receive training in and technical assistance with the Main Street Approach through the Main Street Program state coordinators.²⁰⁰

According to the NMSC, three components define Main Street: "a proven strategy for revitalization, a powerful network of linked communities, and a national support program that leads the field."²⁰¹ The first defining component is the Main

¹⁹⁶ "The Main Street Four-Point Approach," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/about-main-street/the-approach/#.VJlc1SvF98E>.

¹⁹⁷ "History of the National Main Street Center," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/about-main-street/the-center/history.html#.VJlcjCvF98E>.

¹⁹⁸ Ibid.

¹⁹⁹ Ibid.

²⁰⁰ Kent A. Robertson, "The Main Street Approach to Downtown Development: An Examination of the Four-Point Program," *Journal of Architectural and Planning Research* 21 (2004): 57.

²⁰¹ "What is Main Street," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/about-main-street/#.VJlb-ivF98E>.

Street Four-Point Approach, a successful strategy for revitalizing downtowns, which will be discussed in a later section.

The second component is a network of communities. Main Street has been successfully initiating and supporting movements and connecting communities across America for over thirty-five years. It is currently rooted in more than 2,000 communities and has a national network of forty-six Main Street coordinating programs. From Main Street's inception to now, over \$56 billion have been put into programs that help to revitalize the downtowns and neighborhood commercial districts in cities, towns, and villages under the direction of the coordinating program staff.²⁰² The coordinating staff in each state help to develop the local Main Street programs, "...expand the network of Main Street communities, provide resources and technical assistance, and work with the NMSC to explore new solutions to revitalize and respond to emerging trends throughout the nation."²⁰³

The third component that defines Main Street is NMSC's position as a leader in the field of national support programs. Since its establishment in 1980, the NMSC has been "...a national organization committed to historic preservation-based community revitalization."²⁰⁴

6.2.1 Goals of the Main Street Program

The goal of the Main Street program is to help communities revitalize their commercial and downtown districts, especially those along the main street, using a historic preservation-based method, the Main Street Four-Point Approach. The Main Street Program also aims to establish, at the start, shared goals and a shared vision with the community members and professionals involved in order to direct all efforts toward the same objectives. Other goals of the Main Street Program are detailed in

²⁰² Ibid.

²⁰³ Ibid.

²⁰⁴ "Welcome to the National Main Street Center, Inc.," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/#.VJJ5ryvF98E>.

the Main Street Four-Point Approach, which will be discussed in-depth in a later section.²⁰⁵

6.2.2 Benefits of the Main Street Program

The Main Street Program offers several benefits to a community. The program:

1. *Provides an economic development strategy.*

According to the fourth point of the Main Street Four-Point Approach, this program can help a community both strengthen and diversify its economic assets and programs.²⁰⁶

2. *Promotes the revitalization of a downtown area through historic preservation.*

With its roots based in historic preservation, the Main Street Program seeks to preserve the history of a place.²⁰⁷

3. *Brings a community together.*

This program encourages people in a community to come together and take a stand to better the areas in which they live. The program helps the community develop a shared goal, and in doing so, helps to build a stronger connection between the people in the community.

6.2.3 Main Street Four-Point Approach

A big part of the reason the Main Street program is successful is due to the Main Street Four-Point Approach, a preservation-based economic development tool that helps local communities to leverage their district's local assets, whether these are cultural or architectural heritage, local enterprises, or community pride. The following lists and explains each of these four points:

²⁰⁵ "The Main Street Four-Point Approach," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/about-main-street/the-approach/#.VJlc1SvF98E>.

²⁰⁶ Ibid.

²⁰⁷ Ibid.

1. Organization

The organization involves many essential activities such as creating committees, developing funding, appointing memberships, and establishing relationships with those that have a stake in the success of the downtown commercial district. This approach begins with the establishment of a general agreement and cooperation within the community. Partnerships are built among the community groups with a stake in the commercial district, such as business owners, residents, institutions, and government offices.²⁰⁸ Volunteer recruitment and collaboration with other partners is organized. "[A] governing board of directors and standing committees make up the fundamental organization structure of volunteer-driven revitalization programs."²⁰⁹ A program director is also hired and paid to coordinate and support the volunteers. The Main Street Four-Point Approach is most effective when all groups work toward the same goal, which is the focus of organization.²¹⁰

2. Promotion

The goal of the promotional aspect is to create a positive image instilling community pride. One of the major things promotion does is to share the district's Main Street program story with the community's surrounding areas. Promotion is a tool that communicates the district's unique qualities and characteristics, cultural traditions, architecture, history, and other various activities for shoppers, investors, visitors, and potential business and property owners.²¹¹ Essentially, promotion

²⁰⁸ Kent A. Robertson, "The Main Street Approach to Downtown Development: An Examination of the Four-Point Program," *Journal of Architectural and Planning Research* 21 (2004): 57.

²⁰⁹ "The Main Street Four-Point Approach," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/about-main-street/the-approach/#.VJlc1SvF98E>.

²¹⁰ Kent A. Robertson, "The Main Street Approach to Downtown Development: An Examination of the Four-Point Program," *Journal of Architectural and Planning Research* 21 (2004): 62.

²¹¹ "The Main Street Four-Point Approach," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/about-main-street/the-approach/#.VJlc1SvF98E>.

helps to market the community's downtown commercial district to the public, which also involves hosting events and activities to draw people into the town.²¹²

3. *Design*

Design usually means getting the Main Street into shape. The goals of a main street design are to create a safe place; preserve the place's historic character; create a welcoming environment for shoppers, workers, and visitors; and create an appealing atmosphere for the area. According to the NMSC, successful main streets direct people's attention to opportunities in the physical characteristics of the place, such as "...public and private buildings, storefronts, signs, public spaces, parking areas, street furniture, public art, landscaping, merchandising, window displays, and promotional materials."²¹³ Other activities involved in the design process include developing good maintenance practices for the district, rehabilitating historic buildings, fostering suitable new construction, creating design management systems, educating owners in the community about the design, and planning for the future.²¹⁴ It is within this aspect that planners, architects, designers, and historic preservationists can make a difference and help create a revitalized community.

4. *Economic Restructuring*

According to the NMSC, the goal of economic restructuring is to help "...strengthen...[the] community's existing economic assets while diversifying its economic base."²¹⁵ The NMSC goes on to say that this is accomplished "by evaluating how to retain and expand successful

²¹² Kent A. Robertson, "The Main Street Approach to Downtown Development: An Examination of the Four-Point Program," *Journal of Architectural and Planning Research* 21 (2004): 57.

²¹³ "The Main Street Four-Point Approach," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/about-main-street/the-approach/#.VJlc1SvF98E>.

²¹⁴ Ibid.

²¹⁵ "The Main Street Four-Point Approach," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/about-main-street/the-approach/#.VJlc1SvF98E>.

businesses to provide a balanced commercial mix, sharpening the competitiveness and merchandising skills of business owners, and attracting new businesses that the market can support."²¹⁶ With economic restructuring, creative reuse of historic properties can be applied to vacant buildings and properties where the community and property owners have the opportunity to convert these into commercial spaces that generate revenue. The goal is to bring together a commercial district that is responsive "...to the needs of today's consumers while maintaining the community's historic character."²¹⁷

Kent A Robertson, in his article "The Main Street Approach to Downtown Development: An Examination of the Four-Point Program," details research he conducted on the Main Street Four-Point Approach. He conducted a study in which he surveyed cities and towns with ongoing Main Street programs recognized by the NMSC in order to analyze the effectiveness of the Main Street Four-Point Approach. His study focused on the following research questions:

- "Do communities use the four elements of the Main Street Approach equally, or are certain elements emphasized more?
- What factors contribute to one element being used more than another?
- Do size of city, distance from larger city, or length of time in program impact how the four-point program is used?"²¹⁸

Robertson discovered that each community applies the four-point approach differently and sometimes emphasize one point over the others. He concluded that each community applies the approach according to its local needs and assets and that applying a truly balanced four-point approach was unlikely.²¹⁹

²¹⁶ " The Main Street Four-Point Approach," National Main Street Center, accessed December 1, 2014, <http://www.preservationnation.org/main-street/about-main-street/the-approach/#.VJlc1SvF98E>.

²¹⁷ Ibid.

²¹⁸ Kent A. Robertson, "The Main Street Approach to Downtown Development: An Examination of the Four-Point Program," *Journal of Architectural and Planning Research* 21 (2004): 56.

²¹⁹ Ibid., 60.

Through this study, Robertson identified which points and which application strategies were most successful. In studying organization, Robertson discovered that this approach was highlighted more in newer Main Street programs because of the considerable time and effort it takes to start committees, enlist volunteers, create work plans, and obtain funding during the program's start-up years.²²⁰ Robertson also noticed that in a majority of cases, the programs in his study that obtained funds from their city governments indicated strong private-public partnerships within the community.²²¹ This led him to conclude that strong working relationships between community groups and local governments affect the success of the program.

Robertson discovered that promotion, the second approach, was applied more frequently in the more mature Main Street programs.²²² The most common and effective strategy used for promotion was hosting special events and festivals. Robertson writes that the reason this strategy is effective is because "an event is a one-time occurrence that requires considerable effort over a short period of time.... [V]olunteers are easier to recruit, burnout is less frequent, and results can be seen far more readily."²²³ Events attract people to a town and thereby increase pedestrian traffic. Pedestrians don't have to participate in the events, but hosting the event gives pedestrians an opportunity and excuse to explore the town's businesses, retail establishments, and restaurants, while experiencing the atmosphere of the town. If all or any of these things appeal to visitors, these visitors may come back and spend more time and possibly more money in the town generating pedestrian activity and revenue for the community.

Robertson's study revealed that design, the third approach, was used more often in newer Main Street Programs. In discussing the importance of design to a community, Robertson writes, "[D]esign plays a critical role in determining the strength of a downtown's sense of place. For a downtown to claim a strong sense of place, it should be distinctive from other commercial settings, represent the unique heritage of the community, be pedestrian friendly, and encourage people to

²²⁰ Kent A. Robertson, "The Main Street Approach to Downtown Development: An Examination of the Four-Point Program," *Journal of Architectural and Planning Research* 21 (2004): 61.

²²¹ Ibid., 63.

²²² Ibid., 62.

²²³ Ibid., 64.

linger."²²⁴ In the PPS Placemaking blog entry "Placemaking Meets Preservation," the author asserts that architecture plays such an important role in the attachment people have with places that a great community's backbone is made of the great buildings within it.

In his article, Robertson states that, of the seven design strategies he evaluated, the three most effective were obtaining facade improvement loans/grants, landscaping, and enhancing the town's infrastructure. The other four strategies included providing design assistance, mounting street banners, installing benches and other seating, and highlighting a downtown waterfront, where applicable. The most important goal in implementing these design strategies is to create a pedestrian-friendly downtown. If successful, this can maintain high densities, provide pedestrian traffic for businesses, and help the downtown area to appear more interesting, making it more appealing to the public.²²⁵

The fourth and final approach, economic restructuring, according to Robertson's survey, was not the most effective and, of the four points, was used the least. Robertson's survey revealed that the most effective strategies for economic restructuring were building/space inventory and private/public partnerships. Other less effective strategies included market analysis, business visitations to assist existing businesses, and marketing/recruitment kits. The survey also revealed that the two least effective economic restructuring strategies were seminars and workshops for business owners and targeted business recruitment.²²⁶

6.2.4 Application Recommendation of the Main Street Program for Kapahulu Avenue

The Main Street Program was selected as part of this street design methods study because of its goal of revitalizing communities in commercial downtowns using a historic preservation-based method. Kapahulu Avenue is home to many older

²²⁴ Ibid., 65.

²²⁵ Kent A. Robertson, "The Main Street Approach to Downtown Development: An Examination of the Four-Point Program," *Journal of Architectural and Planning Research* 21 (2004): 66-67.

²²⁶ Kent A. Robertson, "The Main Street Approach to Downtown Development: An Examination of the Four-Point Program," *Journal of Architectural and Planning Research* 21 (2004): 67.

buildings and has an eclectic character with its varied historic architectural styles and numerous local shops and eateries. This project recognizes these characteristics and considers them to be assets that hold within them a large part of the identity of the place. The implementation of the Main Street Program for Kapahulu Avenue could potentially help to rehabilitate and preserve the historic buildings and encourage new uses for them rather than rebuilding or removing them altogether to make way for more big-box companies.

In addition, the Main Street Program could be beneficial in the transformation of Kapahulu Avenue because of its recognition of the importance of organizing community members and professionals, encouraging shared goals and cooperative efforts. This project recognizes that community input and cooperation with professionals is a valuable part of the design process. With community input and cooperation, community pride and a stronger sense of place can result. The Main Street Program was thus studied to gain a different perspective on how communities can come together to improve and take part in the development and revitalization of their community.

Although the primary objective of the Main Street Program is to provide communities with preservation-based economic development tool, the Four-Point Approach provides methods that can be applied to Kapahulu Avenue. Since much of the avenue's historic architecture is in need of attention and maintenance, the Main Street Program's Four-Point Approach can be used to help revitalize the community and turn Kapahulu Avenue back into a place for people. While the Main Street Program's approach does address certain attributes that make a place successful, as discussed in Chapter 2, it will not be applied in this project. In order to explore the effectiveness of this street design method for this project, all points of the Main Street Four-Point Approach would need to be applied. For this project, it would be possible to apply the promotion and design points of the approach but due to time constraints, impossible to apply the organization and economic restructuring points. Moving forward, the promotion and design points will be considered for this project; however, the application of the entire Main Street Program for Kapahulu Avenue is not recommended and will, therefore, not be explored further in this project.

6.3 Method #3: Complete Streets

Complete Streets is a design method that establishes what is known as a "Complete Streets policy" in a community. The Complete Streets design method is "based on the principle that streets are public spaces for people as well as arteries for traffic and transportation."²²⁷ Complete Streets are designed to meet the needs of all users including pedestrians, bicyclists, motorists, and public transportation users. According to the National Complete Streets Coalition, "[b]y adopting a Complete Streets policy, communities direct their transportation planners & engineers to routinely design & operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation."²²⁸ Since Complete Streets responds to the context of the community and is based on the precept that no single prescriptive design exists for a complete street, no two Complete Streets policies are the same and thus no two Complete Streets appear the same.

6.3.1 Goals of Complete Streets

According to the National Complete Streets Coalition, "Complete Streets are streets for everyone."²²⁹ As previously stated, the primary goal of the Complete Streets design is to meet the needs of all street users. Complete Streets also strives to provide safe passage to all street users. Finally, Complete Streets endeavors to create a better functioning street network for all users.²³⁰

6.3.2 Benefits of Complete Streets

The implementation of the Complete Streets method provides many benefits to a community. The method:

²²⁷ National Association of City Transportation Officials, *Urban Street Design Guide* (Washington: Island Press, 2013), 3.

²²⁸ National Complete Streets Coalition, "Complete Streets: Fundamentals," *Smart Growth America*, accessed May 2, 2015, <http://www.smartgrowthamerica.org/documents/cs/cs-brochure-features.pdf>.

²²⁹ Ibid.

²³⁰ Ibid.

1. *Improves safety.*

Through the installation of safety improvements along the street such as "...raised medians and redesign[ed] intersections and sidewalks," Complete Streets can help reduce accidents.²³¹

2. *Encourages walking and bicycling.*

A significant number of Americans experience daily discomfort and illness that can be positively affected by a minimal amount of daily exercise. The following passage, from "Complete Streets: Fundamentals," an online brochure, expounds:

The Centers for Disease Control & Prevention recently named adoption of Complete Streets policies as a recommended strategy to prevent obesity. One study found that 43% of people with safe places to walk within 10 minutes of home met recommended activity levels; among individuals without safe place to walk, just 27% were active enough.²³²

3. *Can help to ease transportation woes.*

Since a goal of Complete Streets is to meet the needs of all its users, pedestrian, bicycle, and public transportation networks can be established on the street. Providing people with different modes of transportation can reduce traffic congestion and "...increase the overall capacity of the transportation network."²³³

²³¹ National Complete Streets Coalition. "Benefits of Complete Streets," *Smart Growth America*, accessed May 2, 2015, <http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/benefits-of-complete-streets/>.

²³² National Complete Streets Coalition, "Complete Streets: Fundamentals," *Smart Growth America*, accessed May 2, 2015, <http://www.smartgrowthamerica.org/documents/cs/cs-brochure-features.pdf>.

²³³ National Complete Streets Coalition. "Benefits of Complete Streets," *Smart Growth America*, accessed May 2, 2015, <http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/benefits-of-complete-streets/>.

4. *Can enhance air quality.*

Because Complete Streets allows for different modes of transportation, when people use modes other than cars, air pollution decreases allowing for better air quality in the area.²³⁴

5. *Can help children.*

Because Complete Streets allow walking and bicycling to take place along the street, children in the community are provided with the option to walk or bicycle to various nearby destinations. "More children walk to school where there are sidewalks, and children who have and use safe walking and bicycling routes have a more positive view of their neighborhood."²³⁵

6. *Makes economic sense.*

"A balanced transportation system that includes complete streets can bolster economic growth and stability by providing accessible and efficient connections between residences, schools, parks, public transportation, offices, and retail destinations."²³⁶

7. *Makes fiscal sense.*

"Integrating sidewalks, bike lanes, transit amenities, and safe crossings into the initial design of a project spares the expense of retrofits later."²³⁷

6.3.3 Key Principles of Complete Streets

With Complete Streets design, it is important to first establish a vision of what the street could be.²³⁸ This gives designers a goal to work toward. The following is a

²³⁴ Ibid.

²³⁵ Ibid.

²³⁶ Ibid.

²³⁷ Ibid.

²³⁸ National Complete Streets Coalition, "What are Complete Streets?," *Smart Growth America*, accessed May 2, 2015., <http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/complete-streets-faq>.

list of key principles of Complete Streets, outlined by the National Association of City Transportation Officials (NACTO) in their *Urban Street Design Guide*:

1. "Streets Are Public Spaces"²³⁹

NACTO states that streets have a larger role in the public life of cities and their communities. Therefore, this principle highlights the importance of emphasizing the public aspect of the street when redesigning it.²⁴⁰

2. "Great Streets are Great for Businesses"²⁴¹

Streets can be economic assets. "Well-designed streets generate higher revenues for businesses and higher values for homeowners."²⁴²

3. "Streets Can Be Changed"²⁴³

Many streets were designed and built many decades ago and need to be updated to meet the needs of today's users. According to NACTO, "transportation engineers can work flexibly within the building envelope of a street. This includes moving curbs, changing alignments, daylighting corners, and redirecting traffic where necessary."²⁴⁴ A street space can also be transformed to take on a different purpose such as a parklet, bike share, or be used for traffic calming²⁴⁵

4. "Designed for Safety"²⁴⁶

Streets can be designed so that people can walk, park, bicycle, drive, and work in an area at the same time, in a safe manner.²⁴⁷

²³⁹ National Association of City Transportation Officials, *Urban Street Design Guide* (Washington: Island Press, 2013), 5.

²⁴⁰ Ibid.

²⁴¹ Ibid.

²⁴² Ibid.

²⁴³ Ibid.

²⁴⁴ Ibid.

²⁴⁵ Ibid.

²⁴⁶ Ibid.

²⁴⁷ Ibid.

5. "Streets Are Ecosystems"²⁴⁸

The following passage is from the NACTO *Urban Street Design Guide*:

Streets should be designed as ecosystems where man-made systems interface with natural systems. From pervious pavements and bioswales that manage storm-water run-off to street trees that provide shade and are critical to the health of cities, ecology has the potential to act as a driver for long-term, sustainable design.²⁴⁹

6. "Act Now!"²⁵⁰

This principle requires that Complete Streets projects be conducted quickly. Low-cost materials are also encouraged in this design principle so that these low-cost materials can be used temporarily until the design has been tested and proves to be successful and funding for permanent materials comes along.²⁵¹

6.3.4 Application Recommendation of Complete Streets for Kapahulu Avenue

The Complete Streets method was selected for this study because of its emphases on creating the street for all users, on safety, and on specifically creating a better environment for pedestrians. Ultimately, this method was chosen for analysis because of its potential for implementation on Kapahulu Avenue.

In 2009, Hawai'i adopted a Complete Streets policy and required each of its counties to adopt this design method. The Honolulu City Council adopted a this policy mid-2012, passing Ordinance 12-15.²⁵² Since that time, the City and County of Honolulu has taken steps to implement this method on various street networks in Honolulu. The City and County of Honolulu has selected fourteen sites on the island

²⁴⁸ Ibid.

²⁴⁹ Ibid.

²⁵⁰ Ibid.

²⁵¹ Ibid.

²⁵² SSFM International, Blue Zones, Gary Toth Associates, *Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II)*, (2015), accessed January 19, 2016, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf.

of Oahu to be studied and ultimately on which to apply the Complete Streets method. Kapahulu Avenue is one of the fourteen sites chosen for the study. In the summer of 2015, the City and County of Honolulu released two "Honolulu Complete Streets Implementation Study Location Reports" for two stretches of Kapahulu Avenue, one report per stretch.²⁵³

Because the Complete Streets method is already under consideration as a street design method by the City and County of Honolulu for Kapahulu Avenue, this method will be explored further in this project and will be analyzed for its ability to redefine Kapahulu Avenue as a third place in the community. The application of this method to Kapahulu Avenue and the contents of these reports will be discussed in chapter 7, which discusses existing plans for Kapahulu Avenue.

²⁵³ Ibid.

CHAPTER 7 | EXISTING PLANS FOR KAPAHULU AVENUE

Kapahulu Avenue is a street that has the potential of being a vibrant third place. Before proposing a design toolkit to inspire and aid the local community in redefining Kapahulu Avenue into a third place, an overview of some previous and existing plans for this street must be addressed. A brief study of these plans can help provide understanding of measures that were taken to improve the conditions of Kapahulu Avenue. This study will also explore the needs and desires of the area's stakeholders as well as things they have noticed about the street. Lastly, this section will examine whether the previous plans for Kapahulu Avenue support the concept of redefining it into a place.

Three plans have been chosen for this part of the study: the Honolulu Complete Streets Implementation Study Location Reports for Kapahulu Avenue; the Kapahulu Community Plan, Phase I Improvements from 2001; and the Hawaii Bicycling League's (HBL) Kapahulu Avenue, Diamond-Kapahulu Oahu Bike Plan. The Honolulu Complete Streets Implementation Study Location Reports for Kapahulu Avenue will be discussed in greater depth than the other two plans as it is the most recent and most relevant of the plans related to this project. Among the topics discussed for these reports are walking audits, key findings based on the walking audits and observations of Kapahulu Avenue, and three concept designs for the implementation of Complete Streets at specific locations on Kapahulu Avenue.

7.1 Honolulu Complete Streets Implementation Study Location Reports (May & June 2015)

In chapter six, the Complete Streets method for street design was introduced. As previously mentioned, the City & County of Honolulu adopted a Complete Streets policy in May 2012. Since then, fourteen sites on the island of Oahu were selected for a study that would demonstrate the application of Complete Streets in specific areas. The studies resulted in reports that provided suggestions for a Complete Streets implementation in these areas. The City & County of Honolulu deemed Kapahulu Avenue as a viable location for the implementation of Complete Streets. According to the May 2015 Honolulu Complete Streets Implementation Study Location Report, this street was chosen due to "...its key location in the mobility network for all users, high traffic volume, presence of major destinations, safety concerns, and streetscaping needs.... [Its] commercial land uses make it a great candidate for a multimodal Complete Street."²⁵⁴

According to SSFM International, Inc. (SSFM), a Hawai'i-based planning, design, and project management firm, the Complete Streets method is a "...transportation policy and design approach."²⁵⁵ SSFM states that this method uses

a design approach that is context-sensitive, multi-modal, and integrated with the community's vision and sense of place. The end result is a road network that provides safe travel and promotes public health, and creates stronger communities.²⁵⁶

In order to achieve context-sensitive solutions that align with the community's vision and sense of place, design professionals (i.e., planners, urban designers, architects, landscape architects, and engineers) need to gain a better understanding of the place and the community. To achieve this, design professionals should work alongside consultants and stakeholders in the community (i.e., health providers, business leaders, city officials, community organizations, and residents in the community).

²⁵⁴ SSFM International, Blue Zones, Gary Toth Associates, *Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II)*, (2015), accessed January 19, 2016, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf, 4.

²⁵⁵ Ibid, 1.

²⁵⁶ Ibid.

Two studies were conducted for Kapahulu Avenue and as a result, two implementation study reports for Kapahulu Avenue were released to the public in the summer of 2015:

1. May 2015, Honolulu Complete Streets Implementation Study Location Report for Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II)
2. June 2015, Honolulu Complete Streets Implementation Study Location Report for Kapahulu Avenue from Kanaina Avenue to Herbert Street (DRAFT II)

Each of these studies focused on different sections of Kapahulu Avenue. The report released in May 2015 covered the area along Kapahulu Avenue from Kaimuki Avenue to Date Street (see Figure 3 and Figure 4) while the report released in June 2015 covered the area between Kanaina Avenue and Herbert Street (see Figure 5).

Both studies were conducted by a team of consultants led by a design team from SSFM. A site analysis of Kapahulu Avenue included an examination of the area's existing land use, transportation facilities, and usage patterns and the fieldwork obtained from walking audits. As a result of these studies, key findings were presented and concepts for the application of the Complete Streets method were also recommended and included in the two reports. In addition to this, SSFM also developed an implementation strategy for their conceptual recommendations ranging from short- to long-term actions. To take these conceptual Complete Streets recommendations a step further, a cost sheet itemizing and estimating construction costs for realizing these concepts was included in each report.²⁵⁷

²⁵⁷ SSFM International, Blue Zones, Gary Toth Associates, *Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II)*, (2015), accessed January 19, 2016, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf.

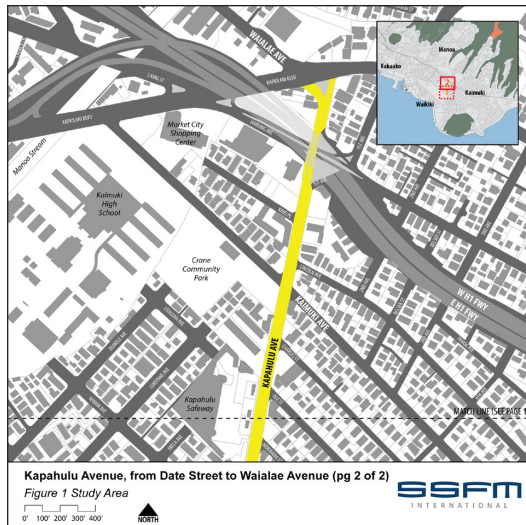


Figure 3. SSFM International, Inc., *Mauka Study Area from Olu Street to Waialae Avenue*

Source: SSFM International, Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II), City & County of Honolulu, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf, (Accessed January 19, 2016).



Figure 4. SSFM International, Inc., *Makai Study Area from Date Street to Olu Street*

Source: SSFM International, Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II), City & County of Honolulu, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf, (Accessed January 19, 2016).

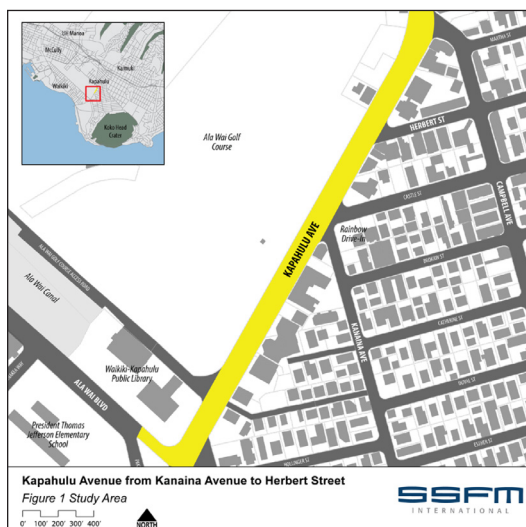


Figure 5. SSFM International, Inc., *Study Area - Kapahulu Avenue from Date Street to Waialae Avenue*

Source: SSFM International, Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II), City & County of Honolulu, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf, (Accessed January 19, 2016).

7.1.1 Walking Audits for Kapahulu Avenue

Understanding the pedestrian environment and walkability of Kapahulu Avenue as well as the needs of the Kapahulu community are keys to developing a Complete Streets design that creates an environment for safe travel and enhances the community. As a part of collecting data for the reports introduced in the previous section, two walking audits of Kapahulu Avenue were conducted for their respective Kapahulu Avenue Complete Streets Implementation Study Location Reports: one walking audit was conducted on September 15, 2014 and the other on January 21, 2015. The walking audits were led by SSFM and a team of national consultants that included national walking expert Dan Burden of Blue Zones. Some other consultant team members that participated in the walking audits were SSFM's Mike Packard, Alan Fujimori, and Michael Motoki; Samantha Thomas, also from Blue Zones; Gary Toth of Gary Toth Consulting; and Stephanie Wright of Nelson Nygaard. To gain additional perspectives and information of the areas of study, stakeholders of the area were also invited to participate. Additional participants included representatives from the following departments, offices, and community organizations:

- City & County of Honolulu Department of Transportation Services (DTS)
- Hawaii State Capital Office
- Hawaii State Department of Health
- A representative for Council Member Ann Kobayashi
- The Hawaii Bicycling League
- Community members

A representative from the City & County of Honolulu Department of Planning and Permitting (DPP) provided further input for Kapahulu Avenue following the completion of the walking audits. This input was provided directly to Gary Toth and was included in the analysis of Kapahulu Avenue.

Each of the walking audit groups discussed site conditions that impact the walkability of Kapahulu Avenue including:

- intersection layouts;
- wide turning radii at certain intersections;

- long crosswalk distances (caused by wide turning radii);
- high speed turns (caused by wide turning radii);
- lack of bicycle facilities;
- lack of greenery on long stretches of the Avenue;
- vehicles traveling over posted 25 mph speed limit; and
- narrow sidewalks.

Participants of each walking audit group also shared their visions, barriers, and what they felt were opportunities for a Complete Streets implementation for Kapahulu Avenue. These included ideas such as reducing the speed of vehicles and improving safety for users of the street (i.e., wider sidewalks, additional trees lining the street, and curb extensions).²⁵⁸

7.1.2 Findings from the Complete Streets Implementation Study Location Reports for Kapahulu Avenue

The walking audits proved to be a good way to observe and learn about Kapahulu Avenue's pedestrian environment. The design professionals, consultants, and stakeholders, through their observations of the area, identified key findings. Using the information, data, and observations gathered from the walking audits and site analyses, a summary of key findings for each study area was provided in their respective reports. Based on these findings and observations, conceptual recommendations for a Complete Streets Implementation, which are discussed in the following section, were developed. The next sub-sections list and describe findings noted from each walking audit.

September 15, 2014 Walking Audit: Kaimuki Avenue to Date Street Findings

- "The built design speed is higher than the posted speed."²⁵⁹

While the posted speed limit is 25 mph, vehicles travel at faster speeds. Because of the longer distances between signalized intersections, drivers are given the perception that the street is designed for faster speeds even though some sections of the street are a narrow 40 feet wide.

²⁵⁸ Ibid.

²⁵⁹ Ibid, 12.

- "The street is well used by pedestrians."²⁶⁰

A steady flow of pedestrian traffic was observed during the walking audit. The walking audit group noticed less pedestrian traffic near the H-1 Freeway.

- "The street is heavily used by older adults and people with mobility devices."²⁶¹

During the walking audit, the participants observed that elderly users and people with wheelchairs or other forms of mobility devices frequent the street. A recommendation for the area would be to design ADA (American Disabilities Act) compliant features for the street and its surrounding spaces.

- "Certain marked crosswalks lack features such as traffic control, median refuge islands, or stop lines."²⁶²

Members from the walking audit group noticed marked crosswalks without traffic signals or stop controls. These crosswalks occurred at Charles Street, Mokihana Street, and Hunter Street. While these crosswalks have pedestrian warning signs, motorists tend not to stop for waiting pedestrians, which causes pedestrians to have to wait until four to five lanes of traffic have cleared before they can cross the street. A recommendation to improve pedestrian safety at these crosswalks is to implement traffic control strategies such as median refuge islands and stop lines.

- "Given the lack of [bicycle] facilities and the high vehicle [volume], many [bi]cyclists were observed riding on the sidewalk."²⁶³

Unfortunately, due to a high volume of vehicles and their fast speeds traveling down Kapahulu Avenue, experienced cyclists bike on the street while other cyclists use the sidewalks. SSFM recommends

²⁶⁰ Ibid.

²⁶¹ Ibid, 13.

²⁶² Ibid.

²⁶³ Ibid, 14.

providing dedicated bicycle facilities such as bike lanes or protected bike lanes.

- *"The diagonal alignment of Kapahulu Avenue results in skewed intersections; many have very long crossing distances or result in large intersections."*²⁶⁴

Some of these skewed intersections are at obtuse angles, which result in wide turning radii. Wide turning radii allow drivers to turn at higher speeds therefore endangering pedestrians in the crosswalks. These skewed sections also create longer crossing distances for pedestrians, which increases their crossing time. A recommendation for this problem is to realign intersecting parts of streets to meet at 90-degree angles. When intersecting streets meet at this angle, crossing distances are reduced to the shortest possible length for all four crosswalks. Another recommendation is to install channelization islands in the middle of long crosswalks to help protect pedestrians from vehicles and to slow vehicles down.

- "Numerous driveways cut across the sidewalk, interrupting the walking environment."²⁶⁵

Since Kapahulu Avenue is a commercial district, it is no surprise that it is lined with a variety of businesses. The walking audit revealed that many businesses have off-street parking with separate driveways. Some driveways are very wide or in some cases, two driveways are close together giving them a dominant presence, cutting into the sidewalk zone. With many driveways cutting into the sidewalk zone, the sidewalk space is reduced and does not allow for pedestrian amenities such as outdoor seating, landscaping and trees, public art, way finding signage, and other amenities.

- "On-street parking can be reduced since most parcels have dedicated off-street parking."

²⁶⁴ Ibid.

²⁶⁵ Ibid, 15.

The design consultants for this study state that "[s]ince most businesses along the street provide customer-specific free parking, this metered parking is not crucial for businesses."²⁶⁶ SSFM recommends the removal of some parking spaces to reallocate the space for streetscaping, parklets, or bicycle parking.

January 21, 2015 Walking Audit: Kanaina Avenue to Herbert Street Findings

- "The wide cross section and straight alignment of Kapahulu Avenue Street encourages speeding."²⁶⁷

The design of this section of Kapahulu has few curves and is 64 feet wide, both elements that encourage vehicles to travel at a faster speed than the posted 25 mph speed limit.

- "Parking is in demand [for this section] on Kapahulu Avenue."²⁶⁸

The store owners along this stretch of Kapahulu Avenue have noticed that their customers use the on-street parking located on the east side of the street. This is because many of the off-street parking lots are private or reserved for business owners.

- "Corner radii along Kapahulu Avenue are large, encouraging higher speed turns and creating long crossing distances for pedestrians."²⁶⁹

Similar to the problems with the avenue's diagonal alignment finding listed in the previous walking audit, the large corner radii in this section of the street also create long crosswalk distances. The distances are even longer at intersections that include dedicated turning lanes, like the 72-foot crosswalk at Herbert Street. SSFM recommends reducing the corner radii to create a safer environment

²⁶⁶ Ibid.

²⁶⁷ SSFM International, Blue Zones, Gary Toth Associates, *Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kanaina Avenue to Herbert Street (DRAFT II)*, (2015), accessed January 19, 2016, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kanaina_Draft_v2.pdf, 11.

²⁶⁸ Ibid.

²⁶⁹ Ibid, 12.

for pedestrians, to enhance the comfort of crossing at the crosswalk, and to reduce the turning speeds of vehicles.

- "Roundabouts are likely to prove infeasible."²⁷⁰

SSFM states that the installation of roundabouts are not possible due to the high traffic volume of Kapahulu Avenue and because the street has an inadequate amount of space for a roundabout.

- "The crosswalk at Kanaina Avenue and Kapahulu Avenue is uncomfortable for pedestrians."²⁷¹

The layout of this crosswalk deters pedestrians from using it due to its uncomfortably long crossing distance, 70 feet, without a signal or traffic control device to aid in pedestrian crossing. The walking audit revealed that most pedestrians avoid using this crosswalk and choose to jaywalk instead.

- "Lighting is insufficient along the Lei of Parks trail."²⁷²

DTS employees who are residents of the Kapahulu area shared that the Lei of Parks trail has poor lighting and many local homeless people occupy the surrounding area. Due to these conditions, potential trail users avoid this area in the evening. Installing path lighting can help encourage pedestrian activity and improve pedestrian safety in the evening.

- "Motorists exiting Kanaina Avenue onto Kapahulu Avenue find it very difficult to make left turns."²⁷³

A high volume traffic is consistent along this stretch of the street, which makes it difficult for motorists to make a left turn off of Kanaina Avenue. SSFM recommends creating a short tuning/refuge lane to help motorists make left turns safely and efficiently.

²⁷⁰ Ibid.

²⁷¹ Ibid.

²⁷² Ibid, 13.

²⁷³ Ibid.

- "There is a lack of regional network connectivity, which may contribute to longer trips by all travel modes."²⁷⁴

The walking audit revealed that this section of Kapahulu Avenue is sandwiched between a mega block (Ala Wai Golf Course) and a residential grid rotated at a 45-degree angle. With the presence of the Ala Wai Golf Course, side streets are limited on this side of the street. SSFM recommends creating a better network of connecting streets, specifically multi-modal connecting streets.

In this part of the report, SSFM writes that Leahi Avenue and Herbert Street have the potential to improve multi-modal connectivity. According to SSFM, Leahi Avenue and Herbert Street are both good candidates for becoming bike boulevards due to their ideal connectivity to Kapahulu Avenue and other streets and their low vehicular volumes. In addition, a realignment of Leahi Avenue with the intersection at Kapahulu Avenue and Ala Wai Boulevard also has the potential to create a better network of connecting streets.²⁷⁵

7.1.3 Complete Streets Concept Recommendations

Based on the walking audit key findings and the site analysis and observations conducted for Kapahulu Avenue, both reports included Complete Streets conceptual design recommendations. While the design team developed these recommendations for all areas of study along Kapahulu Avenue, this section of the manuscript will only discuss three of SSFM's concept designs based on the location of the sites selected as potential sites for the application of the Kapahulu Design Toolkit.

²⁷⁴ Ibid, 14.

²⁷⁵ Ibid.

*Site #1: Concept Design for Kapahulu Avenue from
Ala Wai Golf Course Access Road to Castle Street*

In this conceptual design of the Complete Streets Implementation (see Figure 6), the east side of Kapahulu Avenue (or the side opposite the Ala Wai Golf Course) is reconfigured to improve the pedestrian environment. For this design of Kapahulu Avenue, SSFM incorporated the following recommendations:

- Relocate the crosswalk at the intersection of Kapahulu Avenue and Kanaina Avenue and install a traffic light and raised center median on Kapahulu Avenue.

This recommendation responds to the findings of the uncomfortably long crosswalk and the difficulty of making left turns at this intersection. This recommendation also aims to improve multi-modal connectivity, improve the safety of not only the pedestrians crossing the street but also of the motorists, and helps to facilitate the turning traffic. The installation of the raised center median at the crosswalk helps to regulate vehicle speeds at this wide intersection. SSFM also recommends widening crosswalks at all intersections to 20 feet.

- Relocate street parking on the east side (Ala Wai Golf Course side) of Kapahulu Avenue to the west side (Diamond Head side).

This recommendation addresses the finding that there is not enough on-street parking for businesses located on this stretch of the west side of Kapahulu Avenue. By relocating these metered parking stalls, the parking will be near the shops and businesses and pedestrians will no longer have to cross this wide stretch of street after parking.

- Convert west side parking to reverse-in 60-degree angled parking.

Converting parking stalls to this configuration allows for more parking stalls to be added to this side of the street.

- Add curb extensions to the west side of the street.

According to SSFM, placing curb extensions on this side of the street insets the parking stalls and "...narrows the roadway physically and visually, prompting motorists to slow down."²⁷⁶ The curb extensions also extend the sidewalk space for pedestrians and create the opportunity for pedestrian amenities to be installed. Curb extensions also reduce the crossing distance at the intersection of Kapahulu and Kanaina Avenues.

- "Reduce the impact of driveways on walkability."²⁷⁷

This recommendation calls for redesigning the driveways where curb extensions are added and to consolidate adjoining driveways whenever possible.

- Improve "bicycle facilities...[by adding] sharrow marking[s] in the outside lane [in] each direction."²⁷⁸

A sharrow is a shared-lane marking that is placed in the lane of travel where motorists and bicyclists share the space. The placement of the sharrow indicates the preferable designated spot on the street where bicyclists should travel and warns cars to share the road.

- Make improvements to the Lei of Parks Shared Use Path.

Pedestrian scaled lighting can be installed along this path to encourage pedestrians to use the trail after dark and to deter unwanted activity along its stretch. SSFM suggests using pavement markings and signage to designate paths of travel for walkers and cyclists. To improve the comfort of the path users, SSFM recommends designing rest areas along the path with benches and wheelchair spaces where users can rest and enjoy the path's beauty.²⁷⁹

²⁷⁶ Ibid, 16.

²⁷⁷ Ibid.

²⁷⁸ Ibid.

²⁷⁹ SSFM International, Blue Zones, Gary Toth Associates, *Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kanaina Avenue to Herbert Street (DRAFT II)*, (2015), accessed January 19, 2016,

Overall, the concept design for the stretch of Kapahulu Avenue from the Ala Wai Golf Course Access Road to Castle Street improves the safety of all users of the street. However, most pedestrian improvements are focused on the west side of the street. Reasons to focus development of this side of the street include supporting the existing businesses and enhancing pedestrian activity by providing more space for pedestrian amenities and streetscaping. While the west side of the street is better equipped to support pedestrian activities, comfort, and safety, this design concept neglects to make considerable improvements to the east side of the street bordering the Ala Wai Golf Course.

The east side of the street, along this stretch of Kapahulu Avenue, remains almost unchanged aside from the relocation of parking to the opposite side. A large open, green space lies between the border of the golf course and Kapahulu Avenue. This space has the potential of being further developed to bring life and increased pedestrian activity to this side of the street. While no structures currently exist in this open space, the space could be turned into a plaza, a park space, or a recreational space for the local community. If this open green space was further developed, it would be better to retain the on-street parking on this side of the Avenue or to build a parking lot that could support this side of the street. By developing the open space and transforming it into an engaging space where people may gather, this stretch of Kapahulu Avenue can become a place where both sides of the street enhance the street as a third place.

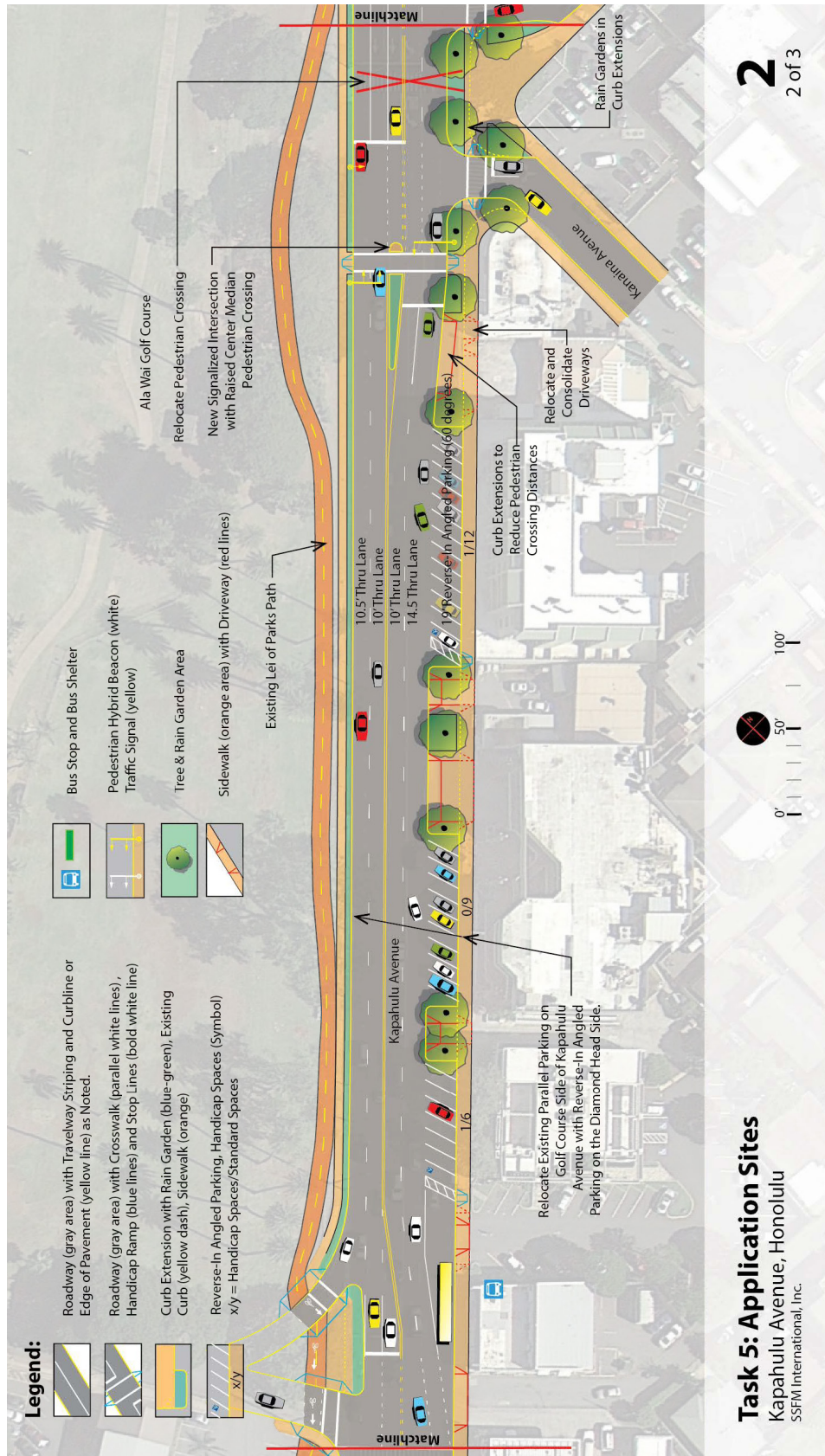


Figure 6. SSFM International, Inc., Concepts for Kapahulu Avenue from Ala Wai Golf Course Access Road to Castle Street
Source: SSFM International, Inc., Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kanaina Avenue to Herbert Street (DRAFT II), City & County of Honolulu, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kanaina_Draft_v2.pdf, (Accessed January 19, 2016).

Site #2: Concept Design for Kapahulu Avenue at Date Street

One of the principles of Complete Streets is to make sure that all street users are safe. The concept design for Kapahulu Avenue at Date Street (see Figure 7) aims to simplify this busy intersection and improve the pedestrian environment. To accomplish these goals, SSFM implemented the following recommendations:

- Reduce the posted speed limit and redesign the street for a speed of 20 mph instead of 25 mph.
- Add sharrow markings to the outside lanes on both sides of the street and add signage.

These markings and signs indicate this part of the street is to be shared with bicyclists. Taking these measures help to encourage bicycling and to improve the safety of the bicyclists.

- Reduce the turning radius at intersections with curb extensions.

Implementing this recommendation helps decrease the pedestrian crossing distances at this larger intersection.

- Use curb extensions to extend the sidewalk space.

Extending the sidewalk gives additional space to improve the walkability of the pedestrian environment. Pedestrian amenities, especially seating, and streetscaping can be provided in these spaces.

- Reconfigure driveway designs so that the sidewalk becomes dominant over the driveway.

This recommendation addresses the finding that multiple driveways cut into the sidewalk and decrease the safety of this zone for walking. SSFM suggests maintaining the sidewalk at sidewalk level instead of sloping it down as a driveway and using the same concrete sidewalk pattern spanning the driveway. SSFM also suggests minimizing the driveways to a one-way width of 14 feet. In the case of a two-way driveway, SSFM suggests the driveway be no wider than 24 feet.

- Close the right turn slip lane leading from Kapahulu Avenue to Date Street and instead add signage at the previous intersection (Kamuela Avenue) indicating that a right turn can be made there for access to Date Street.

Closing this lane at the Date Street intersection provides what SSFM calls a placemaking opportunity. The space used for the lane can be recovered and added to the existing large channelization island at Date Street. This space becomes a designated space for pedestrians to occupy at their leisure. SSFM sees this space as a potential plaza or mini-park development.²⁸⁰

The data collected from the Complete Streets Implementation Study Report revealed that this intersection is one of the most accident-prone intersections along Kapahulu Avenue. The diagonal alignment of Date Street to Kapahulu Avenue adds to the complexity of the intersection by restricting motorists' views of southbound traffic on Kapahulu Avenue. The alignment also creates longer crossing distances for pedestrians, giving them a longer exposure to vehicular traffic.

The concept design for this intersection aims to reduce its complexity and create a space that is safer for all users of the intersection, including pedestrians, bicyclists, and motorists. Recovering the space from the closed right turn slip lane and adding it to the channelization island creates an opportunity for the intersection to become a place that draws people together. Even though this concept design simplifies the intersection and adds more pedestrian space, it does not address the potential the intersection has to become a third place. To become a third place, the design needs to address the experience of the people. For example, the four corners of the intersection can be developed to host activities in which local people may engage.

²⁸⁰ SSFM International, Blue Zones, Gary Toth Associates, *Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II)*, (2015), accessed January 19, 2016, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf, 17-18.

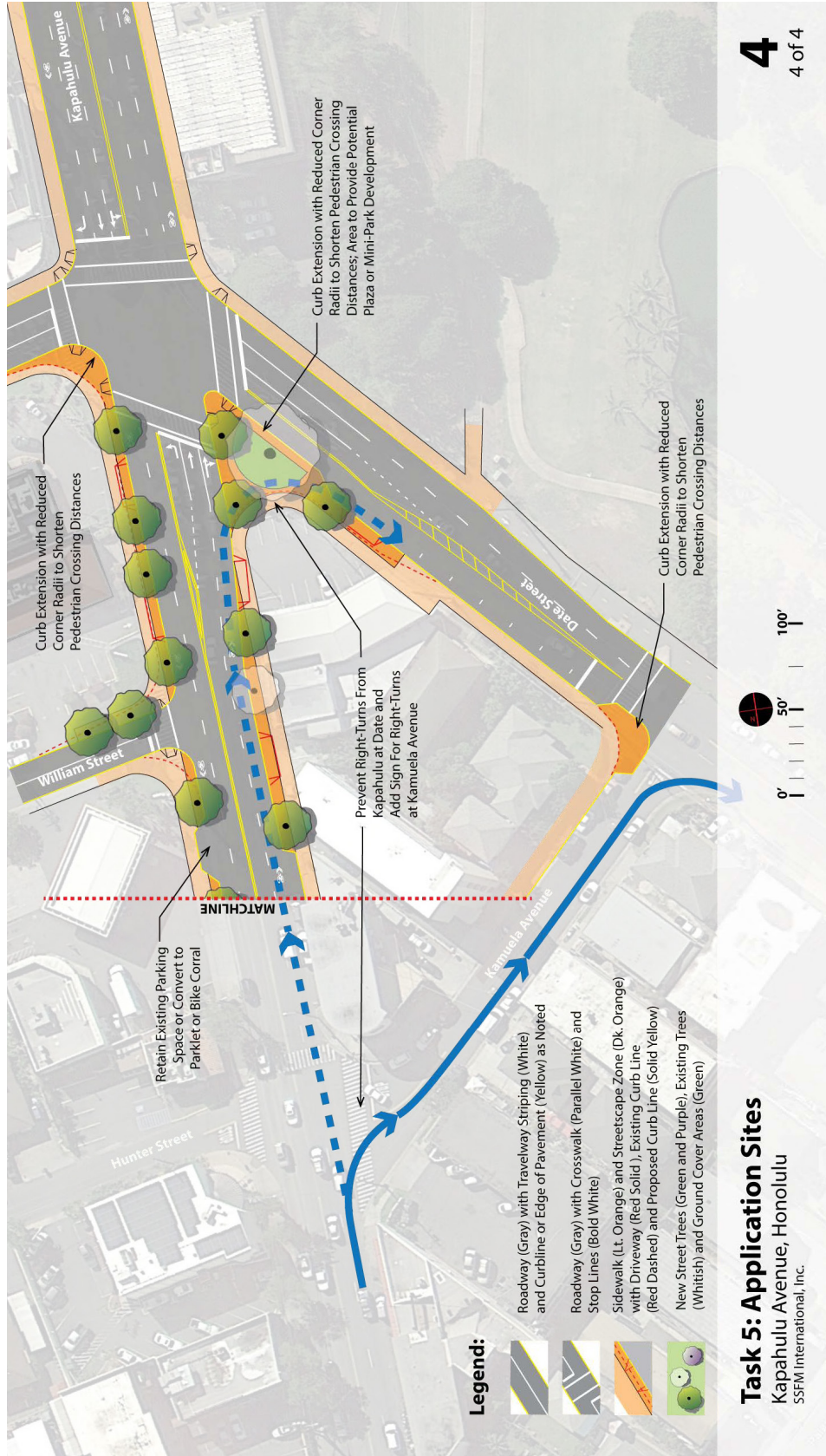


Figure 7. SSFM International, Inc., *Concepts for Kapahulu Avenue at Date Street*
 Source: SSFM International, Inc., *Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II)*, City & County of Honolulu, https://www.honolulu.gov/rep/site/dts/docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf, (Accessed January 19, 2016).

Site #3: Concept Design for Kapahulu Avenue at Winam Avenue Intersection

Concept design recommendations for the five-way intersection where Kapahulu, Winam, and Palani Avenues meet (see Figure 8) are the main focus of this analysis since this intersection serves as the third selected site for a potential application of this project's Kapahulu Avenue Design Toolkit. Concept design recommendations for this site are similar to those of site #2 (the intersection at Kapahulu Avenue and Date Street). SSFM's recommendations for the design of this five-way intersection include the following:

- Reduce the posted speed limit and redesign the street for a speed of 20 mph instead of 25 mph.
- Add sharrow markings to the outside lanes on both sides of the street and add signage. (Refer to Site #2's recommendation for adding sharrow markings and signage.)
- Reduce the turning radius at the intersection with curb extensions.

This recommendation helps decrease the pedestrian crossing distances at this particular intersection. The curb extension at the corner of Winam and Palani Avenues also helps to reduce the speed of vehicles making right turns.

- Use curb extensions to extend the sidewalk space. (Refer to Site #2's recommendation for curb extensions.)
- Remove the second driveway of the vacant parcel and reconfigure its design to make the sidewalk dominant over the driveway. (Refer to Site #2's recommendation addressing driveways.)
- Add center medians on Winam Avenue at both pedestrian crossings.

Center medians on the street at the pedestrian crossings helps to lower vehicle speeds, which helps to improve pedestrian safety.²⁸¹

The intersection at Kapahulu, Winam, and Palani Avenues is another complex intersection; it is a five-way intersection with three right turn slip lanes, one in each direction of Winam Avenue and the third at Palani Avenue. The street design improvements, shown in the concept design for this intersection, aim to improve the safety of all of the intersections' users. Again, the use of curb extensions increases the space on the sidewalks and narrow streets to help slow vehicles down.

The recommendations listed above are good strategies for improving the safety conditions of the intersection but they are mostly recommendations that address redesigning the street and sidewalk conditions; they do not address the intersection's potential for being turned into a third place. In order for this to happen, the concept design and recommendations for this intersection must address potential activities and components that bring people into the space to interact with each other and the environment. This Complete Streets design approach is more of a first step that can be taken toward reconfiguring the space to be able to host pedestrian amenities and activities. In order for this intersection to be transformed into a third place, the next step should be to look into what design components and strategies can be implemented to create a space that is accessible to all; connected to its surroundings; and comfortable, social, and engaging for people. An example of how this intersection can become a third place is discussed further in chapter eleven.

²⁸¹ Ibid.

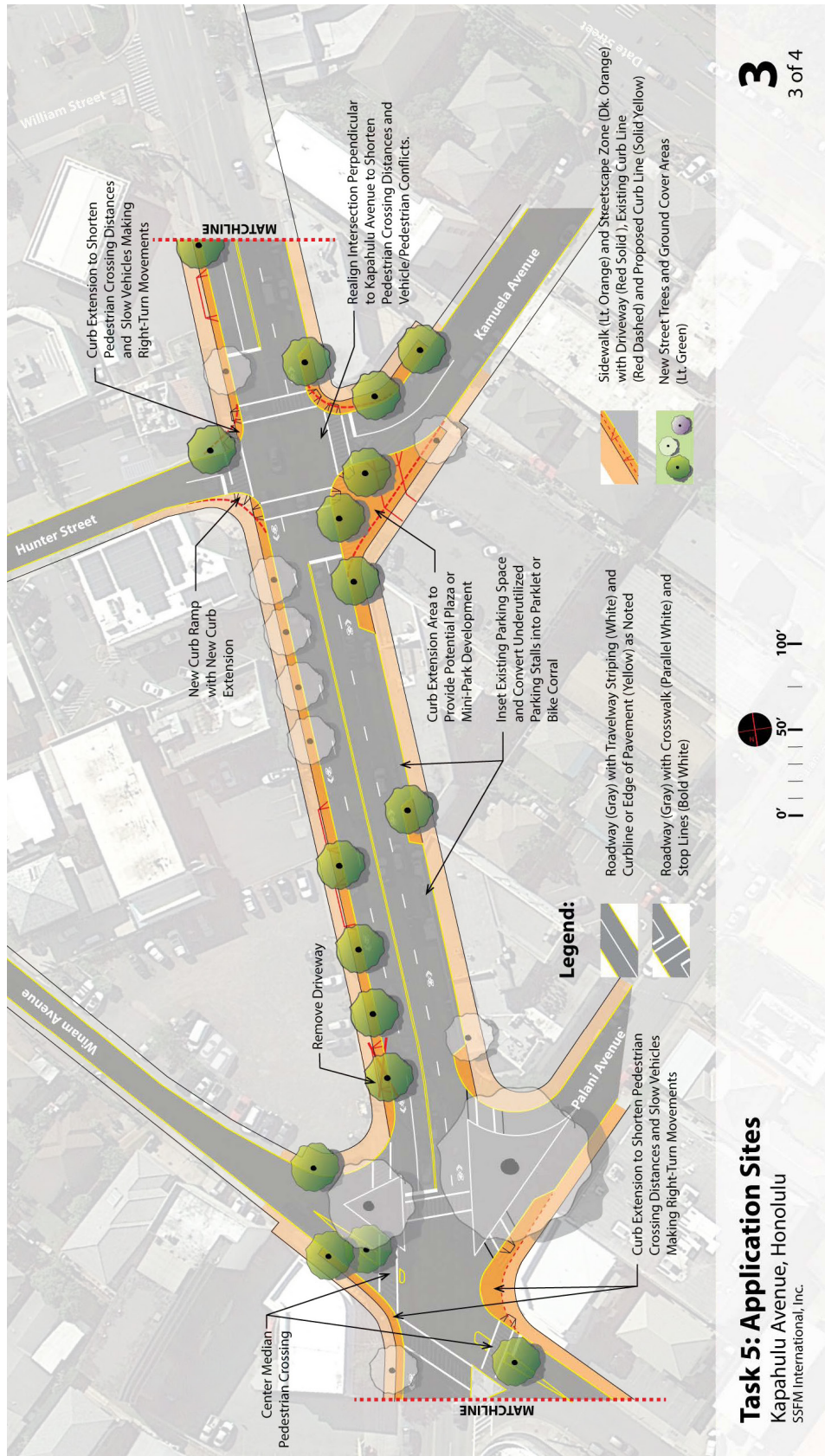


Figure 8. SSFM International, Inc., Concepts for Kapahulu Avenue from Winam Avenue to Kamuela Avenue
Source: SSFM International, Inc., *Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II)*, City & County of Honolulu, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf, (Accessed January 19, 2016).

7.2 Kapahulu Community Plan, Phase I Improvements (2001)

The May 2015 and June 2015 Honolulu Complete Streets Implementation Study Location Reports for Kapahulu Avenue are the most recent plans that have been released to the public addressing improvements to Kapahulu Avenue. These reports are also the most recent example of including the input of stakeholders and people of the community in the design planning for Kapahulu Avenue. Prior to this, community members helped plan improvements for the Avenue in 2001, when the Kapahulu community, led by planner John Whalen, completed the Kapahulu Community Plan, Phase I Improvements (referred to from here on as the Kapahulu Community Plan), which laid out a vision for the future development of the area.

The Kapahulu Community Plan was conceived to guide the community in "...strengthening the physical character, appearance, and identity of Kapahulu."²⁸² This plan proposed several projects to "...reinforce the image of Kapahulu as a community for residents and local-serving businesses."²⁸³ The plan specified a need for more open public spaces, more room for parking, and development that reflected Kapahulu's mixed-use history. The community, together with John Whalen, specified three main themes and images to work towards:

- "Improve and sustain Kapahulu's residential community and neighborhood-serving businesses, services and public facilities
- Enhance the makai end of Kapahulu, particularly near the terminus of Ala Wai Canal, as a gateway to major recreational and cultural attractions
- Preserve and improve views of Diamond Head as part of the neighborhood's identity"²⁸⁴

²⁸² City & county of Honolulu Department of Design and Construction, and PlanPacific, Inc., *Kapahulu Community Plan, Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, (2001), accessed April 28, 2015.
http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf, 1-1.

²⁸³ Ibid.

²⁸⁴ Ibid, 1-2.

7.2.1 Proposed Projects of Kapahulu Community Plan

Projects such as improvements to the streetscape and existing parks were to provide residents with more places for gathering and opportunities for recreation. The building of municipal parking lots was another set of projects proposed to provide more parking spaces for customers of the local businesses. More specifically, the Kapahulu Community Plan proposed the following building projects for the neighborhood:

- Kapahulu Community Center
- Makai Municipal Parking Lot (see Figure 11)
- Mauka Municipal Parking Lot (see Figure 12 and Figure 13)
- Parks & Open Space
 - Improvements to Crane Park
 - Skateboard Park
- Pedestrian & Bicycle Facilities
 - Pedestrian/Bicycle Pathways
 - Bicycle Rest Stop
 - Bicycle Staging Area
 - Crosswalks and Sidewalks
- Other Streetscape Improvements
 - Landscaped Gateways (see Figure 14 and Figure 15)
 - Landscaped Medians and Traffic Diversion
 - Undergrounding of Utility Lines²⁸⁵

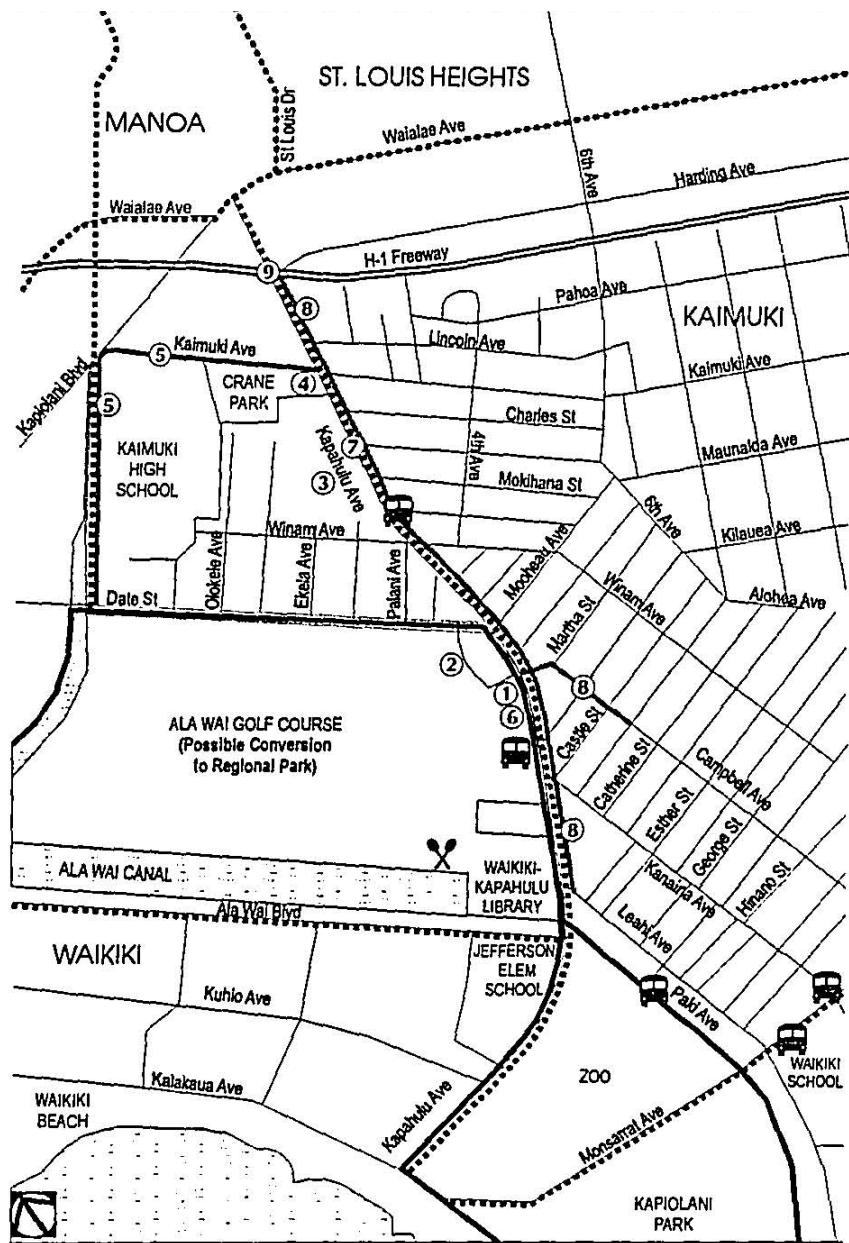
To view the proposed locations of each of these projects, see Figure 9 and Figure 10.

The Kapahulu Community Plan asked for the state to purchase a lot along the avenue that would allow them to achieve some of these project goals. However, Safeway Inc. also had its sights set on the same lot and was able to purchase it for

²⁸⁵ City & County of Honolulu Department of Design and Construction, and PlanPacific, Inc., *Kapahulu Community Plan, Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, (2001), accessed April 28, 2015.
http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf.

its new supermarket complex.²⁸⁶ This is the site where the Makai Municipal Parking Lot was to be built. While a majority of these projects were not realized, the community input and recommendations in this plan are helpful in understanding the wants and needs of the community. This information will be helpful when applying the Kapahulu Design Toolkit (presented in Chapter 10) to a potential site selected along Kapahulu Avenue.

²⁸⁶ Ragnar Carlson, "Visioning Kapahulu: A new big box raises--and may answer-- questions about the meaning of community action," *Honolulu Weekly*, September 7, 2006, accessed December 28, 2014, <http://honoluluweekly.com/cover/2005/09/visioning-kapahulu/>.



Proposed Kapahulu Community Plan Projects:*

- | | |
|---|--------------------------------------|
| ① Kapahulu Community Center | ⑤ Pedestrian/Bicycle Pathway |
| ② Makai Parking Lot | ⑥ Bicycle Staging Area |
| ③ Mauka Parking Lot | ⑦ Traffic Signal |
| ④ Crane Park Improvements/
Bicycle Rest Stop | ⑧ Street Trees/Sidewalk Improvements |
| | ⑨ Skateboard Park |

Figure 9. City & County of Honolulu Department of Design and Construction and PlanPacific, Inc., *Kapahulu Community Plan and Related Projects*, Source: City & County of Honolulu Department of Design and Construction, and Plan-Pacific, Inc., *Kapahulu Community Plan Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf, (Accessed April 28, 2015).

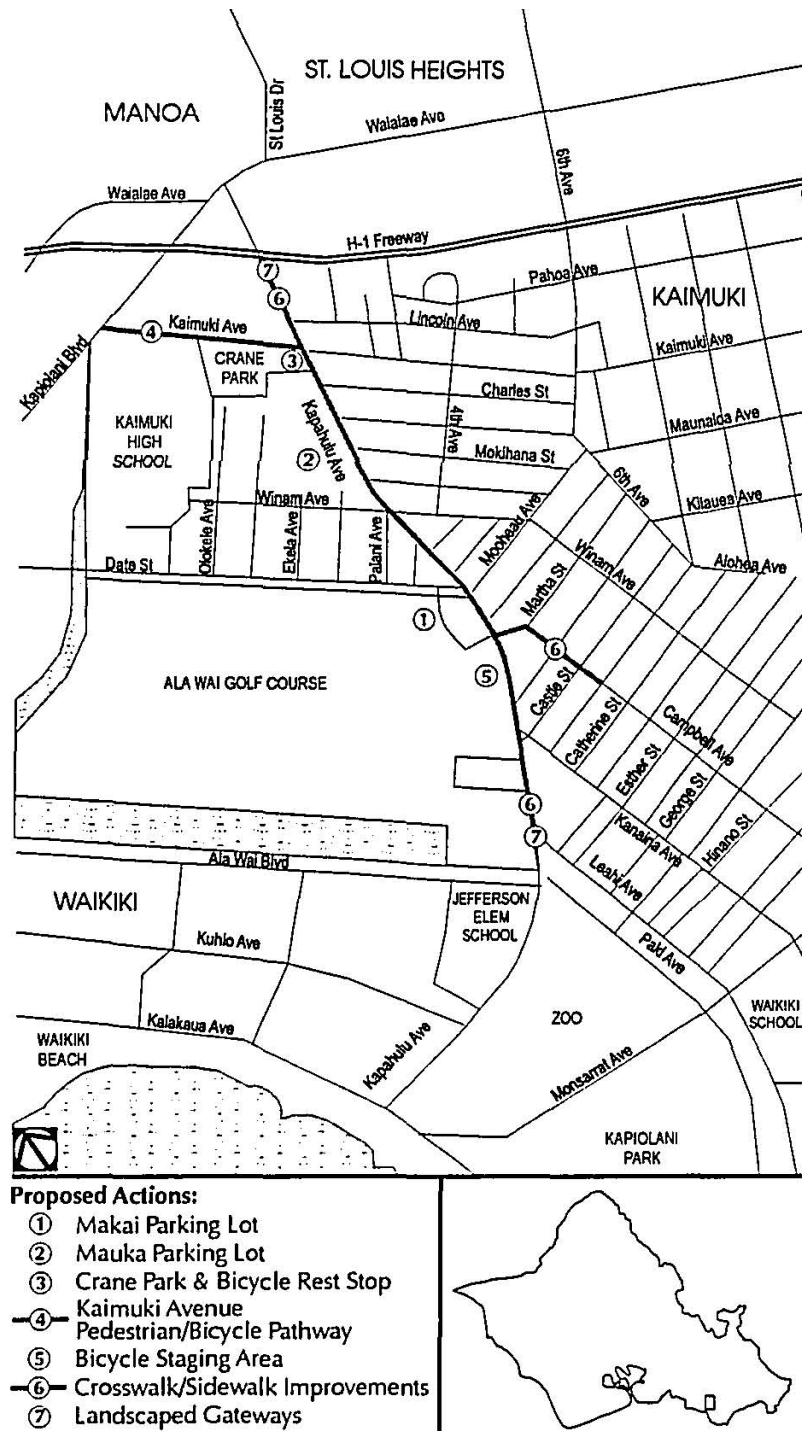


Figure 10. City & County of Honolulu Department of Design and Construction and PlanPacific, Inc., *Location of Proposed Improvements*, Source: City & County of Honolulu Department of Design and Construction, and Plan-Pacific, Inc., *Kapahulu Community Plan Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf, (Accessed April 28, 2015).

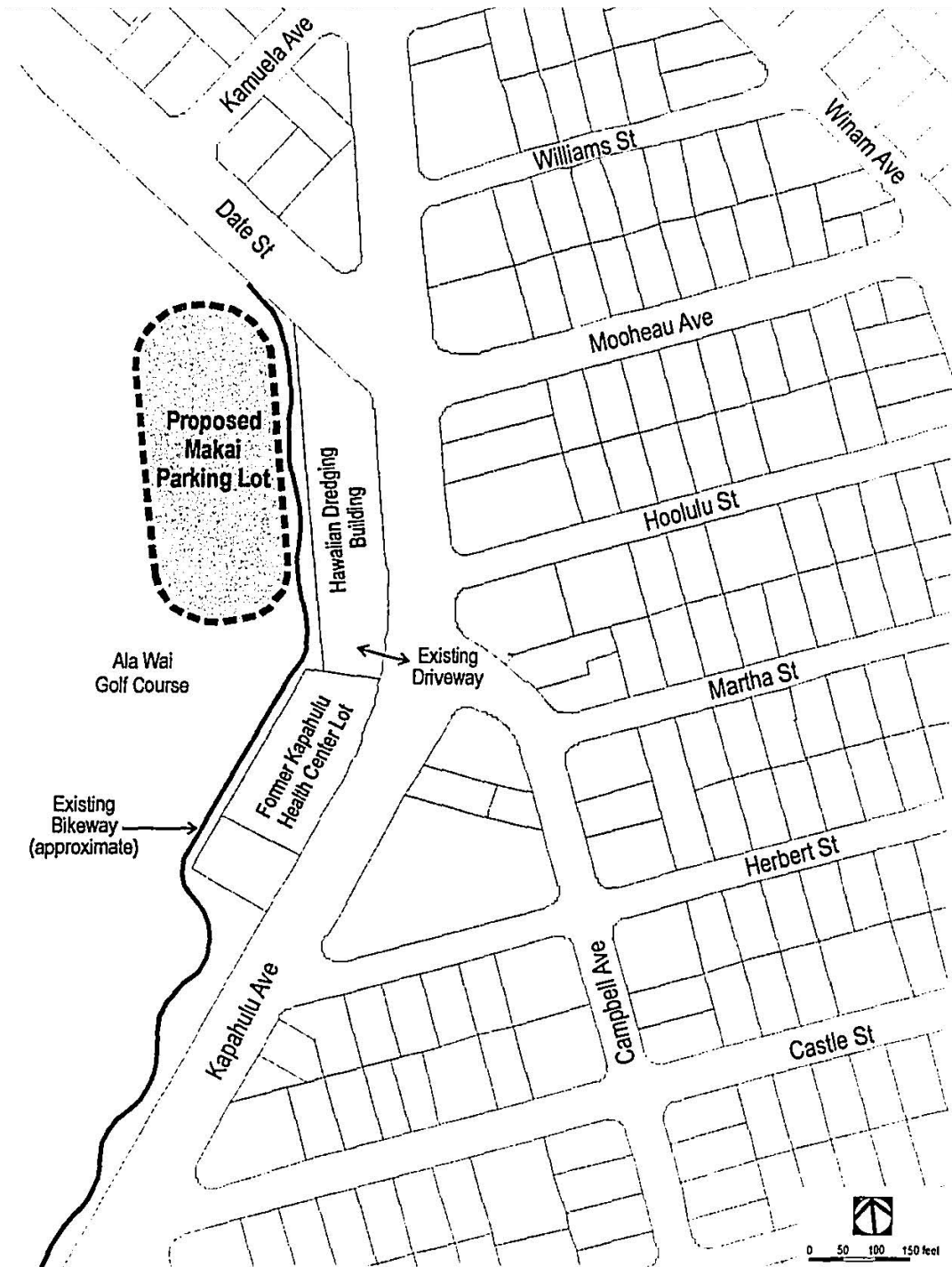


Figure 11. City & County of Honolulu Department of Design and Construction and PlanPacific, Inc., *Makai Municipal Parking Lot - Kapahulu-Date Corner*, Source: City & County of Honolulu Department of Design and Construction, and Plan-Pacific, Inc., *Kapahulu Community Plan Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf, (Accessed April 28, 2015).

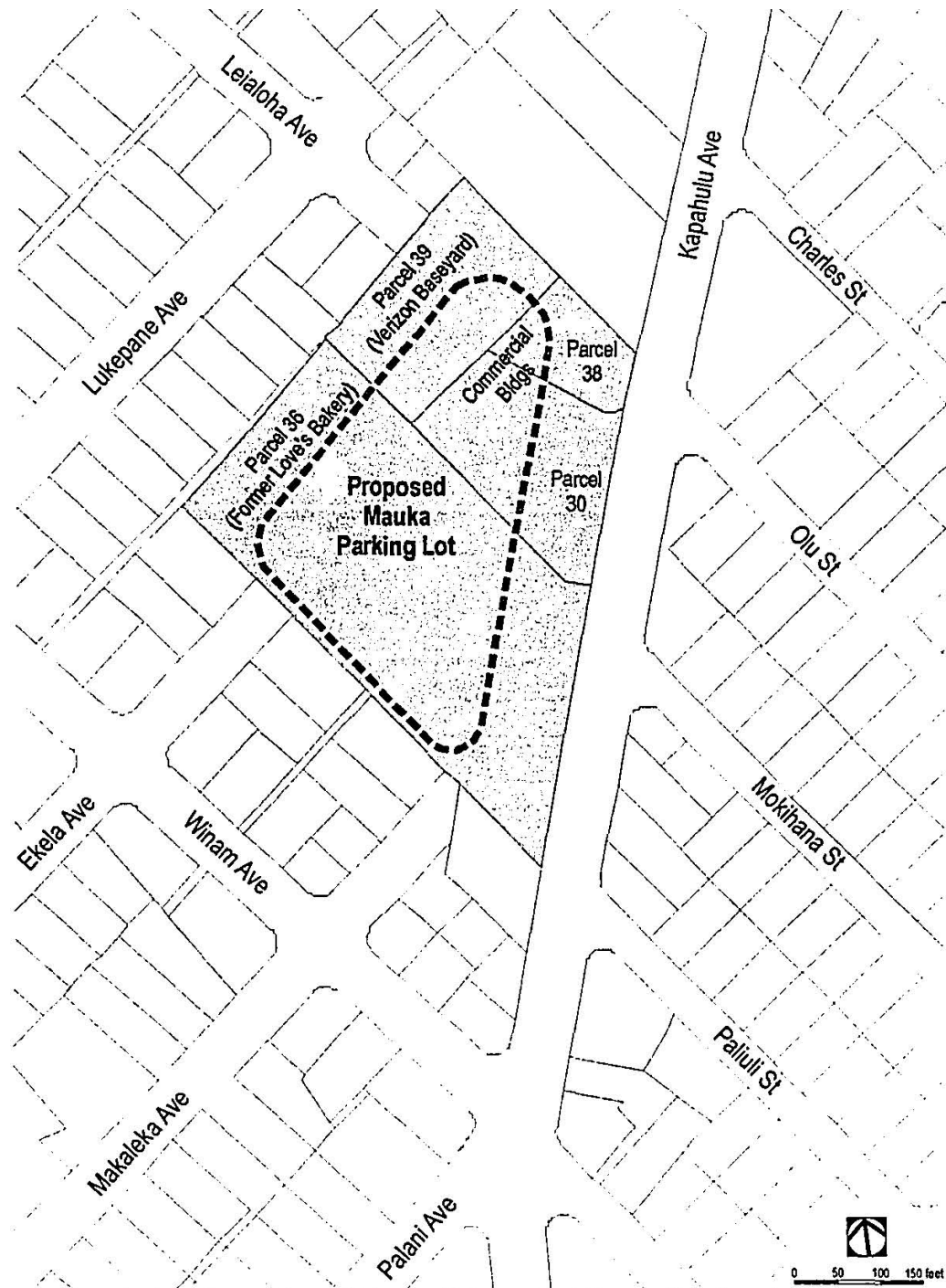


Figure 12. City & County of Honolulu Department of Design and Construction and PlanPacific, Inc., *Mauka Municipal Parking Lot - Former Love's Bakery Site & Adjacent Lots*,

Source: City & County of Honolulu Department of Design and Construction, and Plan-Pacific, Inc., *Kapahulu Community Plan Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf, (Accessed April 28, 2015).

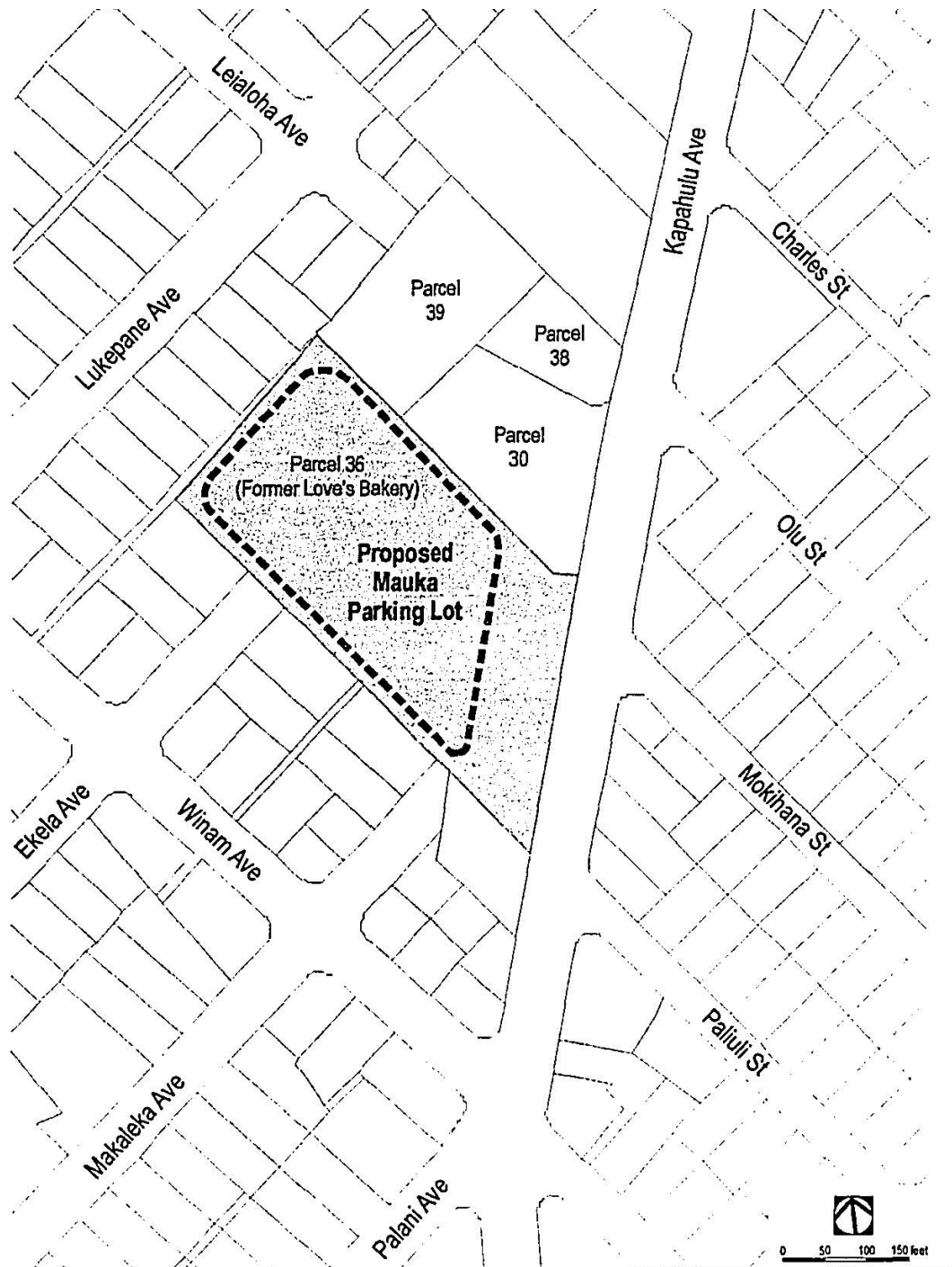


Figure 13. City & County of Honolulu Department of Design and Construction and PlanPacific, Inc., *Mauka Municipal Parking Lot Alternative - Former Love's Bakery Site*,

Source: City & County of Honolulu Department of Design and Construction, and Plan-Pacific, Inc., *Kapahulu Community Plan Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf, (Accessed April 28, 2015).

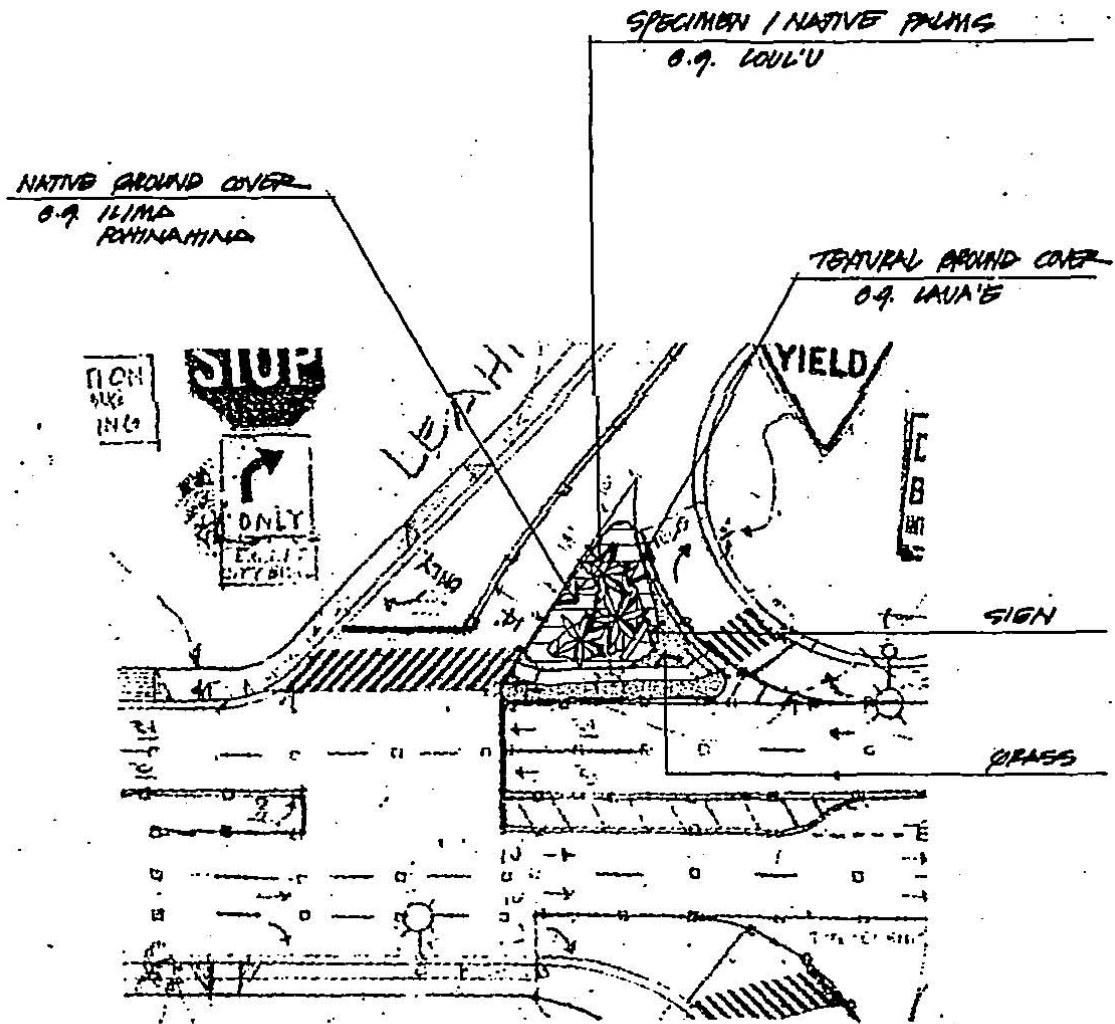


Figure 15. City & County of Honolulu Department of Design and Construction and PlanPacific, Inc., *Makai Entry Landscaped Gateway - Kapahulu Avenue and Leahi Avenue*,

Source: City & County of Honolulu Department of Design and Construction, and Plan-Pacific, Inc., *Kapahulu Community Plan Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf, (Accessed April 28, 2015).

7.3 Kapahulu Avenue, Diamond-Kapahulu Oahu Bike Plan

The last plan to be discussed in this section is the bicycle plan for Kapahulu Avenue put together by the Hawaii Bicycling League (HBL). According to its website, "The Oahu Bike Plan calls for bikeways to be added to most of the major streets in the area."²⁸⁷ The Oahu Bike Plan mainly focuses on adding bikeways to the Ala Moana and Kakaako areas to support the viability of the rail as an option for transportation. Creating a network of bikeways in these areas also aim to connect to existing bikeways in Waikiki, Ala Moana Beach Park, and on Nimitz Highway.²⁸⁸

Kapahulu Avenue is a street that directly connects Waikiki to Kaimuki and the H-1 Freeway. This is also one of the few through streets in the area that runs mauka (mountain side) to makai (ocean side). The Oahu Bike Plan proposes to run a bike route along the entire length of Kapahulu Avenue, providing an easy travel route from Waikiki to Kaimuki. The Kapahulu Avenue bike route would also connect to existing bicycle infrastructure, including the existing Date Street bike path; the existing bike lanes in Waikiki; and the Complete Streets bike infrastructure on Waiialae Avenue, which consists of sharrows and bike lanes. HBL's website notes that "Current Department of Design and Construction plans for [Kapahulu] include sharrows for selected segments of Kapahulu."²⁸⁹ The Kapahulu Avenue bike route is considered to be a short-term implementation project in the Oahu Bike Plan.²⁹⁰

²⁸⁷ Hawaii Bicycling League, "Diamond Head-Kapahulu St, St Louis Hts Bike Plan," accessed February 20, 2016, <https://www.hbl.org/diamond-head-kapahulu-st-st-louis-hts-bike-plan/>.

²⁸⁸ Ibid.

²⁸⁹ Hawaii Bicycling League, "Kapahulu Avenue, Diamond Head-Kapahulu, Oahu Bike Plan," accessed February 20, 2016, <https://www.hbl.org/oahubikeplan/oahu-bike-plan-alphabet/kapahulu-avenue-diamond-head-kapahulu-oahu-bike-plan/>.

²⁹⁰ Ibid.

CHAPTER 8 | CASE STUDIES: DESIGN GUIDELINES AFFECTING STREET DESIGN

8.1 Studying Design Guidelines Affecting Street Design

Design guidelines are guiding principles for design modifications and improvements for existing structures and infrastructures, for additions to existing conditions, and for new construction. Design guidelines can be written to guide a variety of users such as designers, planners, city officials, design review boards, property owners, and residents in the future development or new construction of an area. In some cases, design guidelines are created to preserve an area's history and heritage, but in whose image are these guidelines developed and who are the people that benefit from them? Can design guidelines be developed and written to enhance the experience of the people who work, live, and play in these areas? Can they transform a space, such as the street, into an attractive place for people?

In this chapter, five design guidelines for the San Francisco Bay Area were investigated and compared using the case study methodology in order to create an effective design toolkit for Kapahulu Avenue. The purpose of the case studies was to examine the structure of the design guidelines that affect streetscapes, to identify how they acknowledge the unique characteristics of a place, and to determine how a community can be involved in developing these guidelines. Different types of design guidelines were chosen in order to provide a wider perspective of existing methods. Each case study sought to bring light to the structuring of street design guidelines and to identify whether such guidelines can be effective in expressing this project's vision and goals. The case studies also explored methods of designing guidelines that involve an area's community and include the community's input.

Each set of design guidelines was carefully reviewed; each case study specifies the guidelines' vision, goals, and structure, and identifies which party or groups are meant to benefit from their implementation. In addition, for each set of guidelines, notable features were discussed in order to evaluate the successful aspects and methods used in the development of the guidelines.

8.1.1 Choosing Design Guidelines from the San Francisco Bay Area

All five of the case studies were chosen from the San Francisco Bay Area. One reason the San Francisco Bay Area is the exclusive site from which they were chosen involves the area's implementation of unique streetscape designs. Several neighborhoods have created successful places along their streets or have instated programs that re-design the street into a place for the neighborhood community.

Another reason for this selection is due to the unusual character of the area's neighborhoods, which are composed of unique and eclectic buildings and architectural features, and are also located near commercially zoned areas. These are qualities that are similar to those of the Kapahulu area and can potentially be rewritten for this project's design of the street as a third place.

The final reason these guidelines were selected exclusively from the San Francisco Bay Area is simply due to the author's physical location. She studied for a semester in San Francisco and during this time, she was presented with opportunities to conduct studies and site visits to areas in San Francisco and Berkeley, the two locations for which these selected guidelines were written and implemented.

8.1.2 Case Studies Research Methodology

The research methodology for these case studies consists of an analysis of a variety of design guidelines that affect street design in the San Francisco Bay Area. Some were chosen to study the effects of community involvement in the development of the design guidelines. Others were chosen for their attention to the preservation of a site's historical character and identity. Each design guideline is viewed as a case study for to help create a design toolkit for Kapahulu Avenue. Specific features of the design guidelines are analyzed in order to understand successful features of the areas for which the design guidelines were written.

Different types of design guidelines were chosen in order to provide a wider perspective of the existing methods used to structure guidelines related to designing a street as a place. Each of the five selected design guidelines falls under one of

three categories, instructional, community-inspired, or aspirational. The following list details each category and lists the case studies involved:

1. *Instructional Design Guidelines*

Berkeley Design Guidelines, San Francisco Parklet Manual

The design guidelines grouped in this category can be viewed as instructive. Each of these case studies presents a detailed set of guidelines and provides information using a manual-like structure.

2. *Community-Inspired Design Guidelines*

Upper Market Community Vision & Recommendations &

Upper Market Development Design Guidelines, Living Alleys Toolkit

The design guidelines presented in this category are guidelines that have been inspired and/or influenced by the communities for which they were written. These case studies present ways a community can become involved in the development of guidelines.

3. *Aspirational Design Guidelines*

The Principles of R.E.A.C.H.

The design guideline in this category can be viewed as aspiration-driven guidelines. The case study in this category presents a user-focused approach to developing guidelines that act more as an inspiration for those who plan to develop the site in the future.

8.1.3 Analyzing the Design Guidelines

Each case study involves a structured analysis of each of the five sets of design guidelines. These were analyzed based on the following four components (see Figure 16 for related icons):

1. *Vision and Goals*

One way to measure the success of a set of design guidelines is to ascertain whether its stated vision and goals were met. In addition to this, the vision and goals of each set of guidelines were compared with each other to identify similarities.

2. *Who Does This Benefit?*

Part of the goal of these case studies was to determine the parties that benefit from each design guideline set, or in other words, for whom they were written. These parties were grouped as follows: community, designers and planners, and city officials.

3. *Guidelines Structure*

The structure of each set of guidelines was studied to identify and compare different methods for organizing, formatting, and writing design guidelines. Studying the guideline structures will help in determining the organization and format of the Kapahulu Avenue Design Toolkit.

4. *Notable Features*

Notable features from each set of guidelines were also discussed. Each set of design guidelines is unique from each other and therefore each has something different to contribute to this study. These notable features will be compared with each other and will eventually help to develop a process for developing the Kapahulu Avenue Design Toolkit.

ANALYZING THE DESIGN GUIDELINES

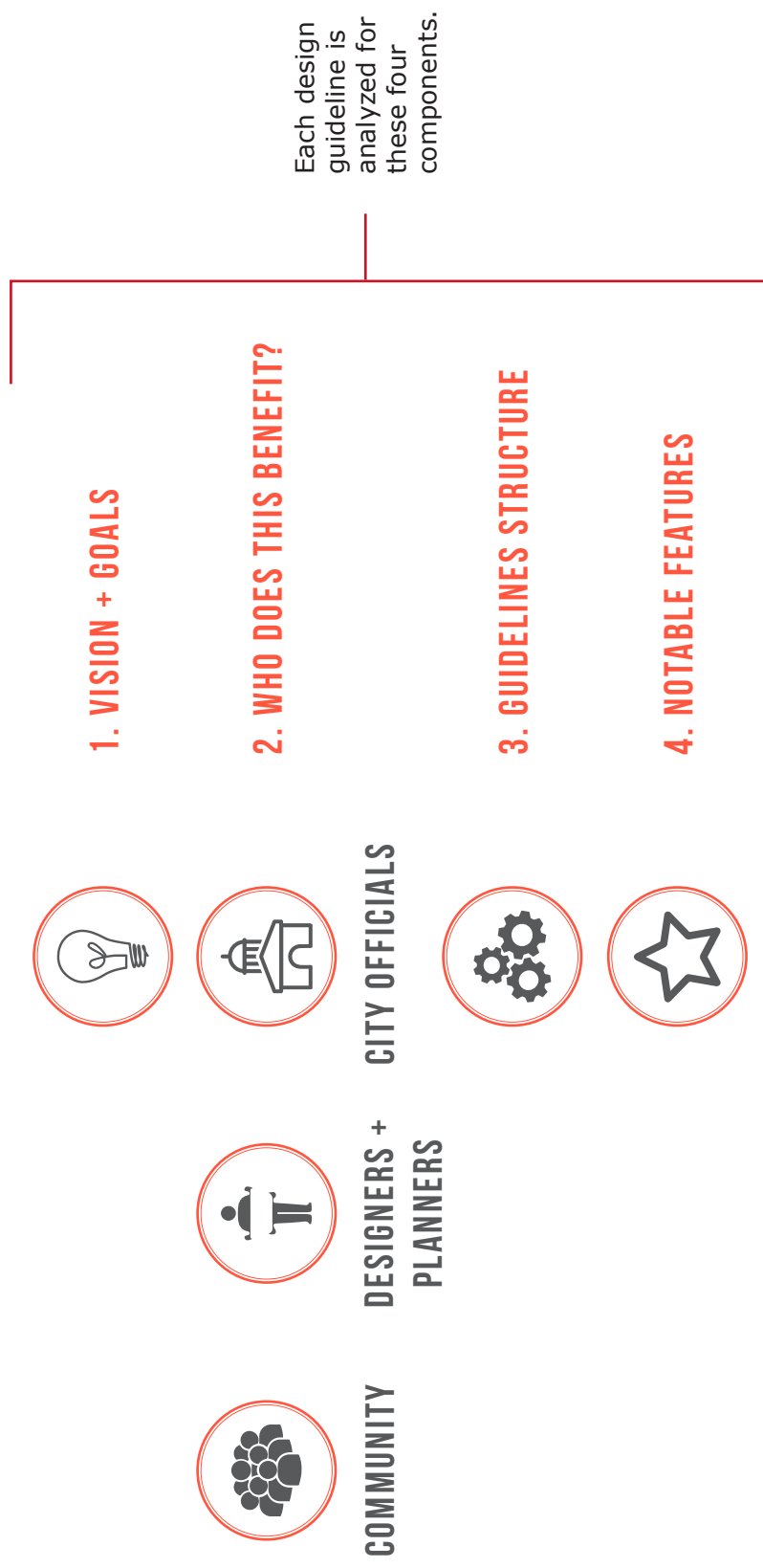


Figure 16. Analyzing the Design Guidelines Icons
Source: Stephanie Ing, University of Hawaii at Manoa

8.2 Case Study #1: Berkeley Design Guidelines



Figure 17. Buildings Along University Avenue in Berkeley, CA

Source: Stephanie Ing, Berkeley, CA

Case Study Category: Instructional Design Guidelines

Location: University Avenue, Berkeley, CA

Year Established: 1996

8.2.1 Overview: Berkeley Design Guidelines

Berkeley is a place filled with history that is reflected in its architecture. The Berkeley Design Guidelines were developed to guide the design of new developments along Berkeley's University Avenue corridor. These design guidelines state that Berkeley has a "...physical environment [that] is a built record of the past."²⁹¹

Without guidelines new developments put a stress on the integrity of the neighborhood and community. The Design Guidelines were developed to ensure that new developments and retrofits enhance and are in sync with the historic aesthetic of the area. They were created to "...supplement and complement the already approved design guidelines for the City, including the 'Downtown Berkeley Design Guidelines' and the Design Review Ordinance."²⁹²

²⁹¹ "Design Guidelines," City of Berkeley, last modified July 1996, accessed September 30, 2015, [http://www.cityofberkeley.info/uploadedFiles/Planning_\(new_site_map_walk-through\)/Level_3_-_General/N.%20Design_Guidelines.pdf](http://www.cityofberkeley.info/uploadedFiles/Planning_(new_site_map_walk-through)/Level_3_-_General/N.%20Design_Guidelines.pdf), 91.

²⁹² Ibid, 90.

8.2.2 Vision and Goals: Berkeley Design Guidelines

This set of guidelines was written with the intent to help make the streets of Berkeley safer, more livable, attractive, and walkable.²⁹³ In order to promote walkability, several goals were established; the designs must:

- create “nodes of mixed-use activity;”²⁹⁴
- promote “urban intensities around these nodes;”²⁹⁵
- encourage “pedestrian oriented amenities;”²⁹⁶ and
- require “streets to be fronted with visually interesting entries and facades.”²⁹⁷

8.2.3 Who Does This Benefit? Berkeley Design Guidelines



Figure 18. Planners + Designers Who Benefit from the Berkeley Design Guidelines

Source: Stephanie Ing, University of Hawaii at Manoa

The Berkeley Design Guidelines were written mainly for the use of designers, planners, and developers who plan to develop the area. These guidelines are structured to guide designers and developers of new developments in creating designs that preserve the character and history of the area. They address architectural and planning topics such as the preservation of the historic character of the area, building configurations and orientations, and building massing and facades.

²⁹³ Ibid, 89.

²⁹⁴ Ibid.

²⁹⁵ Ibid.

²⁹⁶ Ibid.

²⁹⁷ Ibid.

8.2.4 Guidelines Structure: Berkeley Design Guidelines

As previously mentioned, the Berkeley Design Guidelines were designed to supplement existing city-approved sets of design guidelines. In an effort to manage area planning, these guidelines establish a Zoning Overlay System, which is broken down by designation types. The designation types help to distinguish characteristics, uses, building typologies, and specific needs of different areas along the University Avenue corridor (see Figure 19). The three designation types are:

1. Avenue Node: High-density mixed-use buildings
2. Avenue Mixed-Use: Small-scale mixed-use buildings with residential uses in the higher stories of the buildings
3. Neighborhood Residential

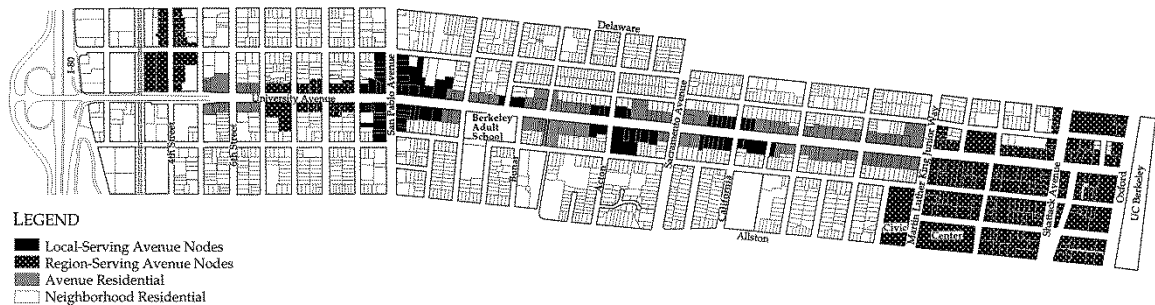


Figure 19. City of Berkeley, *Zoning Overlay for the University Avenue Corridor in Berkeley*

Source: "Design Guidelines" *City of Berkeley*,

[http://www.cityofberkeley.info/uploadedFiles/Planning_\(new_site_map_walk-through\)/Level_3_-_General/N.%20Design_Guidelines.pdf](http://www.cityofberkeley.info/uploadedFiles/Planning_(new_site_map_walk-through)/Level_3_-_General/N.%20Design_Guidelines.pdf) (Accessed September 30, 2015)

This Berkeley Design Guidelines document is divided into four sections:

1. General Guidelines
2. Avenue Node
3. Avenue Mixed-Use
4. Neighborhood Residential

The General Guidelines section applies to all three design designation types and discusses designing for safety; building configuration and orientation; building massing; facades; roofs; building materials; parking garages; open space; lighting;

and signage. Since Berkeley's historical value is predominantly found in its built environment, a subsection addressing design integration is included. The subsection, Integration, discusses ways to integrate new additions and construction into the existing historic fabric and explains that those designing new developments "must pay attention to the siting physical characteristics, and sun orientation of both buildings immediately adjacent to it, as well as those nearby."²⁹⁸ Subsections guiding the siting, physical characteristics, and sun orientation of new developments and buildings along University Avenue are also provided.

The General Guidelines section also includes several more sub-sections. A subsection discusses the importance of a context-based design sensitive to the historic character of Berkeley. Another, entitled Reuse of Historic and Existing Buildings, encourages designers to retrofit, restore, or reconfigure the use of an existing historic building rather than tear it down for new construction.

The second, third and fourth sections of the Berkeley Design Guidelines each address a specific designation type. Each designation type guideline set discusses the type's ideal community character and recommends certain building configurations ideal for the area. In addition to these topics, other topics discussed in some but not all designation type guideline sets are facade appearance, parking and garages, building massing, and other special conditions.

Overall, these guidelines recommend design elements and strategies to ensure that the appearance and quality of new architecture is integrated with Berkeley's existing historic fabric. Some sections provide more flexible suggestions for design approaches and elements that can be included in new projects, while some sections provide more prescriptive guidelines that delineate what is appropriate for the area, such as specific building materials or building-orientation.

²⁹⁸ "Design Guidelines," City of Berkeley, last modified July 1996, accessed September 30, 2015, [http://www.cityofberkeley.info/uploadedFiles/Planning_\(new_site_map_walk-through\)/Level_3_-_General/N.%20Design_Guidelines.pdf](http://www.cityofberkeley.info/uploadedFiles/Planning_(new_site_map_walk-through)/Level_3_-_General/N.%20Design_Guidelines.pdf), 91.

8.2.5 Notable Features: Berkeley Design Guidelines

Preservation of Historic Architecture

One of the underlying goals of the Berkeley Design Guidelines is the preservation of Berkeley's architecture and built environment. The guidelines were assembled based on the recognition that the existing historic fabric of the area is one of the features that makes Berkeley attractive to its people and visitors. The guidelines aim to maintain this built record through the regulation of all new construction. Sections that address appropriate integration and promote the reuse of historic buildings for new developments emphasize the significance of Berkeley's historic fabric. Overall, these guidelines ensure that all new development will both maintain and add to Berkeley's historic character.

The Zoning Overlay System

Another notable aspect of these guidelines is the Zoning Overlay System and the designation types into which University Avenue is divided. By assigning different zones or designation types to the avenue, themes could be developed for and assigned to different areas along the avenue. The guidelines, then, offer design recommendations based on each area's designation and uses to those designing new construction for the area.

8.3 Case Study #2: San Francisco Parklet Manual



Figure 20. Pavement To Parks, *San Francisco Parklet Manual Version 2.2 Cover*
Source: Pavement To Parks, *San Francisco Parklet Manual Version 2.2*,
http://pavementtoparks.sfplanning.org/docs/SF_P2P_Parklet_Manual_2.2_FULL.pdf
(Accessed September 30, 2015).

Case Study Category: Instructional Design Guidelines

Location: San Francisco, CA

Year Established: 2015

8.3.1 Overview: San Francisco Parklet Manual

The San Francisco Parklet Manual is part of the Pavement to Parks Program. According to the Manual, “the Pavement to Parks Program is part of the City of San Francisco’s overall strategy for creating safe, complete streets and new open space for the public.”²⁹⁹ This program works with the city to create new open spaces called parklets and street plazas by enlisting local communities to help create the visions for these small public spaces in their neighborhoods.

The San Francisco Parklet Manual was specifically written to guide the people of a community and the designers in the creation of parklets in San Francisco, from the design concept to its implementation. According to the Manual, “Parklets repurpose part of the street next to the sidewalk into a public space for people. These small parks provide amenities like seating, planting, bicycle parking, and art.”³⁰⁰ In order to give communities a sense of ownership of the parklet in their neighborhood, the residents, nearby businesses, and community organizations all take part in its funding and maintenance.³⁰¹

²⁹⁹ San Francisco Planning Department, San Francisco Public Works, San Francisco Municipal Transportation Agency, and the Mayor’s Office on Disability, *San Francisco Parklet Manual Version 2.2*, (2015), accessed September 30, 2015, http://pavementtoparks.sfplanning.org/docs/SF_P2P_Parklet_Manual_2.2_FULL.pdf, 2.

³⁰⁰ Ibid, 3.

³⁰¹ Ibid, 3.

8.3.2 Vision & Goals: San Francisco Parklet Manual

The San Francisco Parklet Manual lays out five goals the program is to achieve. These are:

1. *"Reimagine the Potential of City Streets"*³⁰²

Parklets aim to help achieve the goals of Complete Streets by offering an approach that creates a "...balance for all users of the street,"³⁰³ including pedestrians, bicycles, cars, and public transportation.

2. *"Encourage Non-Motorized Transportation"*³⁰⁴

Parklets provide pedestrian amenities such as seating and landscaping, which in turn encourages more walking through a neighborhood.

3. *"Encourage Pedestrian Safety & Activity"*³⁰⁵

Parklets act as buffers between the road and the sidewalk and thus safeguard pedestrians and pedestrian activity.

4. *"Foster Neighborhood Interaction"*³⁰⁶

Parklets provide their communities with public, open gathering spaces. With this program, many communities have participated in the design, construction, funding, and ongoing maintenance of these parklets.

5. *"Support Local Businesses"*³⁰⁷

Parklets have the ability to enhance and create safer pedestrian environments. This feeling of safety can attract more people to the area to shop and find services within the neighborhoods.

³⁰² Ibid, 4.

³⁰³ Ibid.

³⁰⁴ Ibid.

³⁰⁵ Ibid, 5.

³⁰⁶ Ibid.

³⁰⁷ Ibid.

8.3.3 Who Does This Benefit?: San Francisco Parklet Manual



Figure 21. Community + Designers who benefit from the San Francisco Parklet Manual

Source: Stephanie Ing, University of Hawaii at Manoa

The San Francisco Parklets Manual was created to aid the people of a community and the parklet designers in the process of creating a parklet in San Francisco from its initial planning stages to its construction and implementation. The Manual guides its users through the detailed process of how to establish a parklet in San Francisco and includes a flow chart of the overall process and a section on the role of the stakeholders.

8.3.4 Guidelines Structure: San Francisco Parklet Manual

The San Francisco Parklet Manual is divided into three sections:

1. Program Overview
2. Design & Construction Guidelines
3. Policy Framework

The first section, Program Overview, introduces the Pavement to Parks program and states the goals of a parklet. The section discusses important points to consider before initiating a parklet project. Those involved in the process are encouraged to understand the full implications of the following:

- Parklets are public and created for all users in a public space to enjoy.
- The parklet review process may take time and patience is appreciated. Also, once a parklet is approved, the community and designer are strongly encouraged to follow the guidelines laid out in the manual to minimize the need for design revisions.
- Designing is an iterative process and parklet designs are subject to several rounds of design reviews and revisions to ensure that they meet all requirements.
- Parklets need to be designed for the urban landscape and several site issues will present themselves and need to be solved. It is highly recommended that those building the parklet work with a design professional such as an architect, landscape architect, or industrial designer to help reduce maintenance costs.³⁰⁸

The section, Program Overview, also describes the stakeholders' role in the creation of a parklet.

- *Project Sponsors* (the community) are responsible for the parklet's design, capital costs, liability, and maintenance.

³⁰⁸ San Francisco Planning Department, San Francisco Public Works, San Francisco Municipal Transportation Agency, and the Mayor's Office on Disability, *San Francisco Parklet Manual Version 2.2*, (2015), accessed September 30, 2015, http://pavementtoparks.sfplanning.org/docs/SF_P2P_Parklet_Manual_2.2_FULL.pdf, 8.

- *The San Francisco Planning Department* is responsible for the application intake and design review.
- *The San Francisco Municipal Transportation Agency* is responsible for the transportation review and bicycle coordination.
- *San Francisco Public Works* is responsible for the permitting and inspection of the parklet.³⁰⁹

The Manual's second section, Design and Construction Guidelines, provides detailed guidelines for the design and construction of a parklet. The section is divided into subsections, listed in chronological order, each with its own detailed guidelines; these are:

1. Parklet Proposal: Site Selection & Outreach
2. Initial Proposal Review & Selection
3. Design Development & Permitting
4. Fabrication & Installation
5. Post-Construction

The third subsection, Design Development & Permitting, provides a guide for each design element involved in a parklet including what is allowable, suggestions for materials, and diagrams showing how certain elements should be assembled. In addition to these, the Manual also describes procedures and equipment needed for the construction of the parklet as well as procedures for its removal.³¹⁰

³⁰⁹ Ibid, 9.

³¹⁰ "San Francisco Planning Department, San Francisco Public Works, San Francisco Municipal Transportation Agency, and the Mayor's Office on Disability, San Francisco Parklet Manual Version 2.2, (2015), accessed September 30, 2015, http://pavementtoparks.sfplanning.org/docs/SF_P2P_Parklet_Manual_2.2_FULL.pdf.

8.3.5 Notable Features: San Francisco Parklet Manual

A Step-By-Step Guide from Creation to Implementation of a Parklet

The San Francisco Parklet Manual provides detailed guidelines for the creation of a parklet (see Figure 22). Although the manual is instructional, it aims to educate and prepare the people in the community for the effort and process needed for the design and construction of a parklet. The Manual provides numerous diagrams and charts to clarify the information presented within. The Manual also includes a policy framework, provided by the City and County of San Francisco, that lists official requirements for the construction of a parklet in the city of San Francisco.

Providing, in one single document, an overview and detailed instructions for each step of the process, helps prepare an applicant with strategies for how to best approach the development of a parklet. This is helpful not only to the applicant, but also to the designers and the City, who approves the parklets; this helps to minimize confusion around the processes and requirements.



Figure 23. Parklets along Powell Street in San Francisco

Source: Stephanie Ing, San Francisco

A Guide for Design Elements that Can be Used in Parklet Design

This Manual provides guidelines for the multiple design elements involved in designing a parklet. The guidelines dictate certain elements that need to be addressed in greater detail, such as the assembly of the parklet platform and designing for accessibility. The guidelines also include clear and informative diagrams for the parklet assembly. Instructional guidelines can at times hinder the creativity and innovation of a design. These guidelines, however, provide suggestions for making the parklet design a success while still conforming to the city's requirements, and do not ultimately hinder the potential for creativity in design. If followed, the guidelines can help to greatly expedite the process.

Recognizing the Responsibilities of the Stakeholders

Another notable feature of the San Francisco Parklet Manual is the recognition of the stakeholders involved and their roles in the creation of the parklet. The Manual has a diagrammatic chart that identifies the responsibilities of the applicants and the city for each stage of the parklet's development (see Figure 22). The Manual also briefly describes the responsibilities of each city department involved in the process as well as those of the parklet's host.

The Manual, by clearly stating each party's responsibilities and at what stage each party enters the process of the parklet's development, helps those designing and building to parklet to identify who to approach and when. This may also help reduce the confusion and anxiety people may feel when embarking on a public project that changes the built environment in their neighborhood. Defining the stakeholders' roles and responsibilities provides stakeholders with the opportunity to better understand the entire approval process and the hurdles each party may encounter.

8.4 Case Study #3:

Upper Market Community Vision & Recommendations and Upper Market Development Design Guidelines

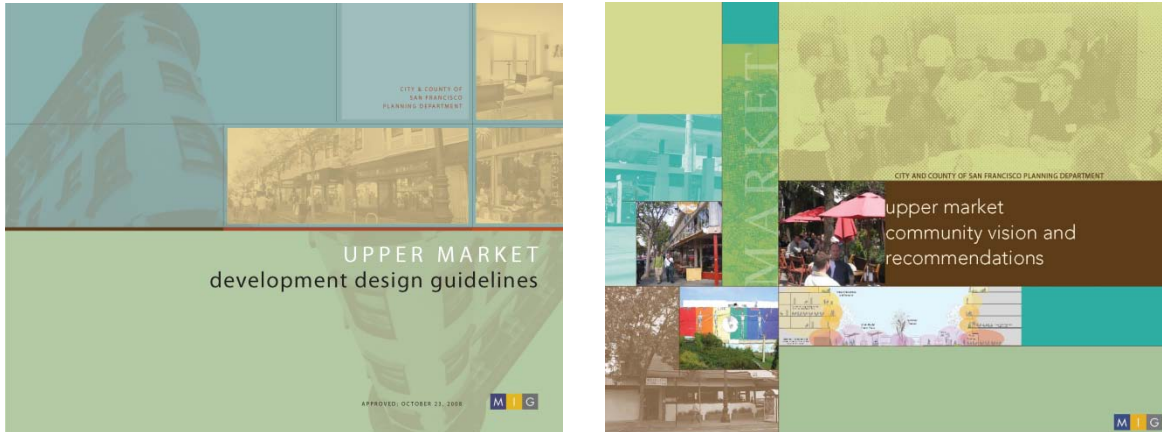


Figure 24. (Left) MIG, *Upper Market Development Design Guidelines Cover*
Source: City & County of San Francisco Planning Department, *Upper Market Community Vision and Recommendations*, http://www.sf-planning.org/ftp/files/Citywide/Upper_Market/Upper_Market_Development_Design_Guidelines.pdf (Accessed March 11, 2016).

Figure 25. (Right) MIG, *Upper Market Community Vision and Recommendations Cover*
Source: City & County of San Francisco Planning Department, *Upper Market Community Vision and Recommendations*, http://www.sf-planning.org/ftp/files/Citywide/Upper_Market/Upper_Market_Community_Vision_and_Recommendations.pdf (Accessed March 11, 2016).

Case Study Category: Community Inspired Design Guidelines

Location: Upper Market Street, San Francisco, CA

Year Established: 2008

8.4.1 Overview: Upper Market Community Vision & Recommendations and Upper Market Development Design Guidelines

In 2007, the community of the Upper Market corridor put together a series of community workshops in which community members, residents, business owners, planners, and developers worked together to develop a community vision for the Upper Market corridor (on Market Street between Castro and Octavia Streets). As a result of these workshops, the Upper Market Community Vision and Recommendations and the Upper Market Development Design Guidelines were created.

The Upper Market Community Vision and Recommendations expresses the community's vision, ideas, and recommendations for improving the Upper Market corridor in both the public and private sectors. The document summarizes these ideas and, among other topics, details the planning process for the initial community workshops. The Upper Market Development Design Guidelines are a companion document to the Upper Market Community Vision and Recommendations. These guidelines provide designers, planners, and property owners with a clear view of what the community envisions for development along the Upper Market corridor. The guidelines ultimately provide design principles for future development within the context of the community's vision provided in the Upper Market Community Vision and Recommendations document.

8.4.2 Vision & Design Principles: Upper Market Community Vision & Recommendations and Upper Market Development Design Guidelines

The Upper Market community envisions creating a vibrant and economically healthy corridor. Through the community workshops, the Upper Market Vision framework was created to help express: 1) the values the community holds for the Upper Market corridor as it changes through time, and 2) strategies for how these values can be expressed through design. The Upper Market vision framework is comprised of three parts: six vision elements (values of the community), seven overarching community design principles, and two implementation methods. The six vision elements are:

- *Inclusivity* - embracing people of all diversities
- *Livability* - safe, comfortable, sustainable living environment for people
- *Connectivity* - allowing for pedestrian movement and all modes of transportation
- *High Quality* - tasteful, high quality, and context-based design and development in the area
- *Health and Safety* - public and environmental health and safety are priorities
- *Accountability* – planning and design projects that consider long-term sustainability; communication between the community, developers, and planning departments³¹¹

Once the community established its vision for the Upper Market corridor, the community members worked with planners to develop the Overarching Community Design Principles. These design principles help to translate the vision elements into physical design. The Overarching Community Design Principles include the following:

- A. Vibrant Pedestrian Realm
- B. Active, Street-Engaging Buildings

³¹¹ MIG, Seifel Consulting, Inc., and Nelson/Nygaard Consulting Associates, Upper Market Community Vision and Recommendations, (2008), accessed September 30, 2015, http://www.sf-planning.org/ftp/files/Citywide/Upper_Market/Upper_Market_Community_Vision_and_Recommendations.pdf.

- C. Well-Designed, Affordable, Flexible Buildings
- D. Strong Local Character and Identity
- E. Network of Open Spaces
- F. Series of Community-Serving Uses
- G. Sustainable Environments³¹²

³¹² Ibid.

8.4.3 Who Does This Benefit?: Upper Market Community Vision & Recommendations and Upper Market Development Design Guidelines



Figure 26. Community, Designers + Planners, & City Officials Who Benefit from the Upper Market Documents

Source: Stephanie Ing, University of Hawaii at Manoa

The Upper Market Community Vision and Recommendations and the Upper Market Development Design Guidelines were developed in partnership with the community to create documents that are beneficial to all parties involved in the planning and development of the Upper Market corridor. These documents were created as guides for designers, planners, developers, and property owners when designing for the Market Street corridor. The documents explain the context of the Upper Market corridor and provide insight into the area from the perspectives of its residents, community, and business owners. The community benefits because these documents now act as the community's voice in all future planning and development of their area. The vision and recommendations document is a written record of what people envision for the future of their community. This type of community participation in the development of an area's design guidelines helps to foster community pride and is one way to encourage people to take an interest in the development of their neighborhoods.

8.4.4 Guidelines Structure: Upper Market Community Vision & Recommendations and Upper Market Development Design Guidelines

Upper Market Community Vision and Recommendations

The Upper Market Community Vision and Recommendations is split into five chapters:

1. Introduction
2. Existing Conditions
3. Upper Market Vision Framework
4. Public Realm Recommendations
5. Implementation

The introduction gives an overview of the vision and recommendations document. This part of the document introduces the planning context, how to use the document on its own and as a companion to the design development guidelines document. This section also gives a brief overview of the community planning process. Chapter two presents an overview of the Upper Market corridor's existing conditions and discusses the area's context in terms of its history, natural environment, built environment, social landscape, circulation and transportation, and land use and economics. Chapter three introduces the Upper Market vision framework and explains the community vision and design principles created and developed during the community workshops. Chapter four introduces the public realm recommendations, which provide a guide for improving the unique character of the public realm of the Upper Market corridor. Lastly, chapter five discusses implementation methods and steps for moving forward with the project.

Upper Market Community Vision and Recommendations

Based on the vision stated in the Upper Market Community Vision and Recommendations, the Upper Market Development Design Guidelines are a set of design guidelines developed to inform private developers of the ways in which the community's vision can be articulated for new developments in the Upper Market corridor. The introduction states that the area is not characterized by any single architectural style, but instead by its diversity. They then stress the necessity for

new developments to be integrated with the existing urban fabric in order to maintain this diversity the community described.

The design guidelines are divided into nine sections. These are:

- A. Building Height and Massing
- B. Inviting Ground Floor Design Features
- C. Public Recommendation Implementation
- D. Upper Story Design Features
- E. Natural Systems in Building Design
- F. Certified Green Buildings
- G. Context-Sensitive Architecture
- H. Community-Supported land uses
- I. Predictable Approval Process

Each section addresses a design feature of new development relating to its architecture, land use, or approval process. A checklist of the recommended guidelines is also provided.

8.4.5 Notable Features: Upper Market Community Vision & Recommendations and Upper Market Development Design Guidelines

Community Workshops are Part of the Planning Process

To begin planning for the future of the Upper Market corridor, the City of San Francisco collaborated with a team of design consultants, led by design firm MIG. Over the course of a year, they developed a planning process that, according to the Upper Market Community Vision and Recommendations, "...was designed to facilitate community agreement around a shared, newly created vision for the overall Upper market area of San Francisco."³¹³ To make this happen, interaction and collaboration with the community was necessary. This part of the planning process involved five stakeholder interview sessions and three community workshops.

The stakeholder interviews were conducted from July to August 2007. Stakeholders included youths, representatives of community organizations, business owners, the government, and political leaders. From September to December 2007, three community workshops were conducted, each with a specific goal. The first workshop's focus was Community Visioning. In this workshop, an analysis of Market Street corridor's existing conditions prepared prior to the workshop was presented and discussed. Establishing a community vision for the future of the area was also discussed. Members of the community in turn expressed their thoughts and assessments of the analysis. The workshops included large and small group discussions in which people shared their ideas for improving the corridor. The results of this workshop formed the base for the community vision and recommendations.³¹⁴

The second community workshop focused on Emerging Design Strategies. This workshop confirmed the community vision established in the first workshop and sought the feedback of community members on the developing design strategies, which the design consultant team had continued to work on during the interim

³¹³ MIG, Seifel Consulting, Inc., and Nelson/Nygaard Consulting Associates, Upper Market Community Vision and Recommendations, (2008), accessed September 30, 2015, http://www.sf-planning.org/ftp/files/Citywide/Upper_Market/Upper_Market_Community_Vision_and_Recommendations.pdf.

³¹⁴ Ibid.

between workshops. The design strategies were developed as a means to achieve this vision the community had created.³¹⁵

The third community workshop focused on the Preliminary Design Framework. In this workshop, the design consultant team presented the refined community design strategies that were developed from the input of first two workshops. The participants reviewed the work and offered feedback.³¹⁶

Community participation in the planning process played an important role in the development of the design guidelines. Key values and design elements of the area were outlined according to the community's thoughts and ideas conveyed in the interviews and workshops. These documents are successful in conveying the new community vision and the recommendations for the development of the area. Conducting community workshops is not only an effective way to discover the wants and needs of a community, but also to understand concerns the community has of the area that can only be gained from long-term experience of this area.

As shown in this example, a site analysis provided a deeper understanding of the area under consideration, which helped the design consultant team to better prioritize the subjects to tackle in community workshops. In order to lead a workshop that seeks the community's help for creating a new vision for an area, those leading the workshop must become familiar with the area and its community. In order to become familiar with the community, the design consultant team interviewed certain stakeholders of the community and was able to engage one-on-one with individuals to assess what types of users journey through the area. The workshop themes and agendas helped participants focus on the task at hand. Furthermore, conducting large and small group discussions helped bring forward ideas in an efficient manner. Smaller group discussions allow more people to express a variety of ideas in one sitting. Large group discussions, which can be conducted after the small group discussions, bring together the ideas and, in the end, allow the group to come up with one shared vision.³¹⁷

³¹⁵ Ibid.

³¹⁶ Ibid.

³¹⁷ Ibid.

Establishing Community Design Principles

The establishment of design principles early in the design process can help to guide and facilitate the planning and design of the area. Design principles present standards that can be viewed as overarching guides when designing. In the Upper Market Community Vision and Recommendations document, the Overarching Community Design Principles help to guide the development of the community recommendations. Each design principle represents something the community values in the area and concepts the community would like to establish for future planning of the Upper Market corridor. By establishing design principles before developing guidelines, the community helps private developers, planners, and designers understand what they value and how they would like to move forward with future improvements of their area.

This method of planning is useful when determining the elements of value within an area. As previously stated, design principles can help to guide the planning and design of an area because they can be viewed as standards for design. The design principles can also represent the underlying ideas of a design concept. In the case of the Upper Market corridor, in coming together to share their experiences and ideas of the area, the community together with the City created design principles that represent the community and their values.

Community Recommendations

The Upper Market Community Vision and Recommendations includes an entire section dedicated to Public Realm Recommendations that were developed with the community. Although these recommendations are not meant to be guidelines, they give access to planners and designers to the community's vision for the future development of their area. In the Upper Market Community Vision and Recommendations document, each recommendation includes a brief explanation of what the community envisions for the area. These recommendations are not only communicated through text, but also through graphics, such as precedent images, diagrams, and drawings and renderings, to give designers an idea of what could be improved and how. These recommendations representing the community's vision present an opportunity for designers and planners to understand what the community values in terms of design and potential improvements. The

recommendations are informative not only to the design community, but also to neighborhood organizations. Because the community recommendations are published, neighborhood organizations have an easily accessible source of information.³¹⁸

³¹⁸ Ibid.

8.5 Case Study #4: Living Alleys Toolkit



Figure 27. San Francisco Planning Department, *Living Alleys Toolkit* Cover
Source: City & County of San Francisco Planning Department, *Living Alleys Toolkit*, http://www.sf-planning.org/ftp/files/plans-and-programs/in-your-neighborhood/market_octavia_living_alley/Market-Octavia-Living-Alleys-Toolkit_FINAL-WEB.pdf (Accessed March 11, 2016).

Case Study Category: Community Inspired Design Guidelines

Location: Market Street and Octavia Street, San Francisco, CA

Year Established: 2015

8.5.1 Overview: Living Alleys Toolkit

The Living Alleys Toolkit defines Living Alleys as streets that are “...activated, pedestrianized, and greened to support environmentally sustainable functions, with an emphasis on community and social activation.”³¹⁹ The Living Alleys Toolkit is part of the Market Octavia Living Alleys Program, which is a part of the 2008 Market Octavia Area Plan. This toolkit was also developed based on existing programs in the San Francisco area, including the Better Streets Plan, the Parklet Program, Green Connections, and the Sidewalk Landscape Program developed by the City’s Public Works. However, the Living Alleys Toolkit strives to take these existing street design plans one step further. The toolkit aims to redesign streets to create a balance between priority zones for bicycles and pedestrians and establish public open spaces along their lengths.³²⁰

The Living Alleys Toolkit was developed through a series of community workshops that spanned several months in 2013. Stakeholders in the community attended these workshops and identified goals they wanted to achieve through the Toolkit. Together, they identified four goals and used these to create 20 design tools that serve as options and inspiration for what can be achieved in the Market Octavia Plan Area as well as in other areas of San Francisco. According to the toolkit, the creation and implementation of these Living Alleys relies on community participation and public-private partnerships.³²¹

³¹⁹ San Francisco Planning Department, San Francisco Public Works, and San Francisco Municipal Transportation Agency, Living Alleys Toolkit, (2015), accessed September 30, 2015, http://www.sf-planning.org/ftp/files/plans-and-programs/in-your-neighborhood/market_octavia_living_alley/Market-Octavia-Living-Alleys-Toolkit_FINAL-WEB.pdf.

³²⁰ Ibid.

³²¹ Ibid.

8.5.2 Vision & Goals: Living Alleys Toolkit



Figure 28. Linden Alley Living Alley in Hayes Valley in San Francisco

Source: Stephanie Ing, San Francisco, CA

Living Alleys are pedestrian-oriented streets. The toolkit prioritizes the focus on streets as places for people; the focus on streets for parking and traffic is a second priority. The toolkit places value on the vitality of the street by encouraging its activation through a set of activities such as walking, bicycling, and community activities; recommending safe street qualities and the safety of its users; and implementing environmental and sustainable best practices such as storm water management and greening of the street.

The four core goals and values that the stakeholders established for living alleys, as listed in the Living Alleys Toolkit, are:

1. *Green*– “A street with opportunities for landscaping to soften the environment and invite social gathering.”³²²
2. *Shared* – “A calm street that balances the priorities of pedestrians and bicyclists with automobiles.”³²³
3. *Vibrant* – “A street that supports the activities of neighbors, community, and businesses. This includes passive and active space for recreation, actively programmed uses such as temporary events, or daily commerce, and spontaneous activities.”³²⁴
4. *Safe & Clean* – “A street that is cared and tended for, well-lighted and maintained.”³²⁵

The Living Alleys Toolkit assumes the City will have little interest in maintaining non-conventional streets and thus envisions implementation of living alleys through public-private partnerships. These public-private partnerships will also help to encourage the involvement of the community, who invested thought and time in the project, in the creation and maintenance of these alleys.

³²² San Francisco Planning Department, San Francisco Public Works, and San Francisco Municipal Transportation Agency, *Living Alleys Toolkit*, (2015), accessed September 30, 2015, http://www.sf-planning.org/ftp/files/plans-and-programs/in-your-neighborhood/market_octavia_living_alley/Market-Octavia-Living-Alleys-Toolkit_FINAL-WEB.pdf.

³²³ Ibid.

³²⁴ Ibid.

³²⁵ Ibid.

8.5.3 Who Does This Benefit?: Living Alleys Toolkit



Figure 29. Community + Designers who benefit from the Living Alleys Toolkit
Source: Stephanie Ing, University of Hawaii at Manoa

The Living Alleys Toolkit was designed by the community members and designers. Part of the purpose of including the community in the design process was to help its members understand the process and design elements involved in creating a living alley. This toolkit can be used by designers as a guide for designing a living alley based on the goals set by stakeholders in the community. The Living Alleys Toolkit states that a living alley is to be “...designed and led by community members...” in order for it to best serve its community. The toolkit also mentions that when a community actively participates in the improvement of its public spaces, everyone in the community benefits. This process fosters a better sense of community and neighborhood pride, leads to the possibilities of public ownership, and helps to ensure the community’s involvement in the living alley’s maintenance.

8.5.4 Guidelines Structure: Living Alleys Toolkit

The Living Alleys Toolkit is divided into four sections that explain the purpose and goals of a living alley, how it can be designed and developed, and finally, how it may be implemented. These four sections are:

1. Introduction
2. What is a Living Alley?
3. Designing A Living Alley
4. Implementation and Resources

In the introduction, the toolkit lays out the vision and goals for a living alley and gives a brief overview of its purpose and what a living alley can mean to a community. The introduction also gives a brief context, project overview, and states implementation priorities for the creation of a living alley. This section helps a reader understand the background of the project, its design elements, and how it will be implemented by giving priorities and goals to certain user groups.

The second section of the toolkit, What is a Living Alley?, presents several case studies of examples of existing living alleys or other relevant street designs in both San Francisco and other places. These case studies provide examples of how similar projects have successfully transformed a street into a place for people.

The third and fourth sections, Designing a Living Alley and Implementation and Resources, lay out the design tools themselves and recommend implementation processes with resources to aid in the design and creation of a living alley. Overall, each section in the toolkit is successful in reiterating the vision of a living alley and explaining how each section and design tool helps to achieve the community's vision and goals.

8.5.5 Notable Features: Living Alleys Toolkit

Educational Resource for the Public

The Living Alleys toolkit is a successful public educational resource on the process of creating a living alley. It can also provide insight to a designer or planner on the process designing a living alley in close collaboration with a community. The toolkit also provides realistic information on the design process and achieving the goals set for the project. The toolkit states that “trade-offs are inevitable” as is the need to compromise during the designing and construction of living alleys. Exposing this type of information to all parties allows each party to gain a better understanding of each other and of how the design process is approached from different points of view.

Including Design Considerations

The Living Alleys Toolkit provides design considerations to address at the start of a living alley project. These considerations provide designers with concepts and features to consider and potentially incorporate within the design. They also supply parameters, rules, and regulations for the project site. Including a design considerations section in the toolkit, with brief explanations of each consideration, can help designers to collate and assess important information needed for designing a living alley. Explanations of design considerations can often be overwhelming, but the Living Alleys Toolkit is successful in first giving a brief overview of the reasons something should be considered.

Outline of the Design Tools

The tools in this toolkit are divided into four groups, where each set of tools is designed to achieve a core goal of the living alley. Four core goals were established at the community workshops in the beginning phase of the development of this toolkit. Each core goal addresses a part of the overall vision of the Living Alley Toolkit and can also be viewed as a theme for a particular living alley. Stakeholders may choose to incorporate one or several goals into their living alley design.

As mentioned above, each core goal has a set of design tools. These design tools are recommended innovations and strategies that aid in the conversion of a

street into a living alley. The design tools are grouped into five categories: furnishings, lighting, landscaping, pedestrian-oriented design, and active uses. Each design tool is given a brief overview explaining its purpose and advantages, as well as suggested locations for its installment. The overview is followed by a brief set of recommended design guidelines for implementation of the design tool. In addition, each design tool section includes information with estimated implementation costs, the stakeholders involved, and other core goals the tool may help to achieve. This information is helpful in explaining what the design tool is, how it can help achieve the core goal, and the feasibility of its construction or implementation.

This part of the document is successfully brief and to the point. The design tool outlines incorporate simple graphics and short bodies of instructive text. The Living Alleys Toolkit offers recommendations and suggestions rather than detailed prescriptive guidelines. It provides ideas and starting places and leaves up to the designer how the design tools should be used to create a living alley. This gives the user a base structure from which to start the design of the living alley, but with less restrictions and more inspiration and freedom. As a result, the living alleys built with the help of this toolkit have the potential of being unique from one another.

Community Workshops: Developing Goals and Design Tools

The development of this toolkit not only entailed an examination of case studies of similar completed street projects and input from existing street design guidelines, plans, and manuals, but most importantly, involved and relied on the insights of the community, for which it was developed. Drawing information from and working with the community to develop the Living Alleys Toolkit's goals and design guidelines through a series of workshops is an example of a great way to involve the members of a community in the process of making positive changes in their neighborhoods. As a result of these workshops and prior research, the authors of this toolkit created a document that illustrates design tools that help to achieve the vision and goals the community set for a living alley.

Overall, the Living Alleys Toolkit is successful in involving the community at an early stage. Working with the community to ascertain its desires and needs helps to create a document that promotes local ideas and goals and advocates for community in the development of its neighborhoods. Conducting these workshops

not only helps designers to draw insightful information about the site and the people of the area, but also helps community participants refine their own goals and vision for the future development of their neighborhoods and businesses.

8.6 Case Study #5: The Principles of R.E.A.C.H.

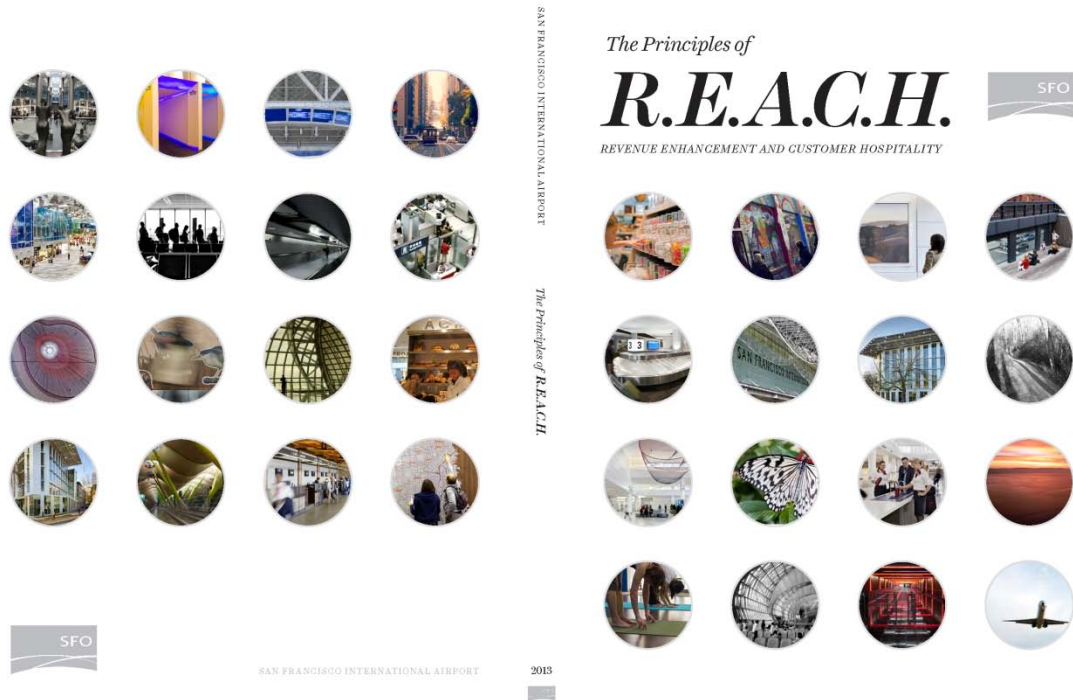


Figure 30. Gensler, *The Principles of R.E.A.C.H.* Cover

Source: Gensler, *The Principles of R.E.A.C.H.* (2013), PDF e-book

Case Study Category: Aspirational Design Guidelines

Location: San Francisco International Airport, San Francisco, CA

Year Established: 2013

8.6.1 Overview: The Principles of R.E.A.C.H.

After the completion and great success of Gensler's design for Terminal 2 at the San Francisco International Airport (SFO) in 2011, the SFO asked Gensler to document design qualities that specifically enhance the passenger experience.³²⁶ This documentation process developed into the R.E.A.C.H. (Revenue Enhancements and Customer Hospitality) Program, whose principles were then laid out in a guide called The Principles of R.E.A.C.H. As stated in its introduction, the document "...is an inspirational document for architects, designers, tenants and SFO employees who work in and with the San Francisco International Airport (SFO). This document has been created in an effort to enhance the customer experience, drive revenue generation and bring a cohesive character to the entire airport campus."³²⁷ In addition, the document provides the intended audience, all those who work with or for the airport, with an understanding and awareness of SFO's vision and goals. While this document is formatted as a set of guidelines, it is not meant to be firm and prescriptive, but rather inspirational.

³²⁶ Gensler, The Principles of REACH (2013), PDF e-book.

³²⁷ Ibid.

8.6.2 Vision & Goals: The Principles of R.E.A.C.H.



Figure 31. SFO Terminal Play Area
Source: Stephanie Ing, SFO Airport

Figure 32. SFO Terminal 2
Source: Stephanie Ing, SFO Airport

The Executive Summary states, “The Principles of R.E.A.C.H. 2013 is designed to serve as an aspirational guide for SFO’s long term passenger experience levels facilitating growth, improvement strategies, operational innovations and efficiency.”³²⁸ The SFO aims to appeal to a diverse set of visitors and has stated that it is committed to becoming the number one American airport in customer satisfaction and to offering passengers a quality experience that enhances their time spent at the airport. This vision is reflected in the key goals for the R.E.A.C.H. Program, which are stated in The Principles of R.E.A.C.H., and listed below:

1. “Achieve the highest customer satisfaction ratings”³²⁹
2. “Create socially and ecologically sustainable business models”³³⁰

³²⁸ Ibid.

³²⁹ Ibid.

³³⁰ Ibid.

3. "Become a top generator nationally"³³¹

In addition to enhancing the passenger experience, SFO is also working to instill a local sense of place reflective of the Bay Area. By creating different productive spatial typologies that appeal to a wide variety of passenger types as well as spaces that connect passengers to the unique culture of San Francisco, SFO hopes to achieve the key goals of its R.E.A.C.H. Program. In the SFO Vision section of The Principles of R.E.A.C.H., the authors write, "SFO truly cares about the customer experience and is committed to delivering a unique experience for every passenger."³³²

³³¹ Ibid.

³³² Ibid.

8.6.3 Who Does This Benefit?: The Principles of R.E.A.C.H.



Figure 33. SFO Staff, Design Consultants, and Passengers who benefit from The Principles of R.E.A.C.H.

Source: Stephanie Ing, University of Hawaii at Manoa

The Principles of R.E.A.C.H. was created to provide the SFO staff, airline staff, tenants, and design consultants with a document that expresses SFO's overall vision and how the airport would like its future design projects to be addressed. This document provides a brief overview of SFO's development background and how the terminals operate on a daily basis. This information is helpful for the SFO staff, airline staff, and tenants for decisions about the airport's day-to-day operations. The document provides a set of design principles that helps keep the airport on track with its goals and helps remind each person involved that the overall goal is to enhance the experiences of the passengers at this airport.

The document also provides designers with the airport's cohesive vision and a set of values and goals to be realized in the design of the airport's spaces, information that is beneficial for beginning stages of the design process. The Principles of R.E.A.C.H. contains extensive studies of multiple passenger typologies, including excerpts from passenger interviews, documentation of passenger experiences, and an analysis of the information gathered. Although the document's stated intended audience is SFO staff, airline staff, airport tenants, and airport design consultants, its information can also be indirectly beneficial to the airport's visitors and passengers. In order to enhance the quality of passenger experience within an airport, one must understand the passenger's perspective. This research into the passenger experience allows design consultants to design spaces that truly appeal and cater to multiple passenger types. In the end, the ones who ultimately benefit from this part of the design process are the passengers.

8.6.4 Guidelines Structure: The Principles of R.E.A.C.H.

The Principles of R.E.A.C.H. is divided into four sections:

1. Background Information
2. The Passenger Experience
3. SFO Values
4. Journey Moments

The first section, Background Information, gives a brief overview of the document and information relevant to its purpose. The section presents SFO's vision for customer satisfaction and enhanced passenger experiences as well as the airport's five-year strategy and an explanation of the R.E.A.C.H. program. This section also presents an outline of each SFO terminal through facts including total number of passengers, annual revenue, yelp ratings, brief terminal profiles, and more.

The second section, The Passenger Experience, is devoted to passenger research. This section introduces three travel types and five passenger typologies. Each passenger typology is discussed detailing each type's needs, experiences, and frustrations with the airport. This section also presents a typical journey through the airport for each passenger typology and includes what they may be feeling at every major stopping point along the way.

The third section of The Principles of R.E.A.C.H., SFO Values, introduces the value system at SFO. As part of the development of The Principles of R.E.A.C.H., Gensler interviewed and held workshops with SFO employees and executives to determine these values. Here, each value is discussed in detail and includes an explanation of the value, how it is relevant to the airport and its future, case stories, interviews with SFO staff and experts in the community, and strategies to implement in the future design of the airport to help make each value a reality.

The fourth section, Journey Moments, documents the journey passengers take through the airport, which is comprised of key "Journey Moments." Each Journey Moment is detailed with the following information: the main passenger types that will pass through this point of the journey, key SFO values from the previous

section that can be represented, an opportunities checklist of things to consider and essential needs of the area, and a future forecast of what can happen in the space.

8.6.5 Notable Features: The Principles of R.E.A.C.H.

Inspirational Guidelines Document

The introduction of this document clearly states its purpose and explains that it is not a prescriptive set of design guidelines, but rather informational and inspirational for those commissioned to do design work for SFO. These guidelines provide guidelines recommendations and suggested strategies for enhancing the passenger experience at the airport. The Principles of R.E.A.C.H. demonstrates that guidelines can be creative in the way information is presented.

Defines Values Through Interviews and Workshops with the Staff

The Principles of R.E.A.C.H. introduces the values of SFO in its third section. Through a series of interviews and workshops with SFO employees and executives, Gensler worked to establish a value set for SFO to use to guide its improvement efforts. This is another example of how the client and community were used as a source of information.

Developing User Typologies:

Consideration of User Experiences Through Their Perspectives

The Principles of R.E.A.C.H. is successful in developing these guidelines to address not only the key goals, but also the needs and desires of the passengers that pass through the airport. The document states the importance of considering multiple passenger typologies and experiences of the airport from arrival to departure. Interviews were conducted at the airport as part of the research to obtain a better understanding of the wants, needs, and experiences of the people in the airport. This is an example of how interviews with a place's users can be beneficial in determining their hopes and expectations of a public place.

This document is also an example of a different and creative way to present user typologies in a manner that engages the reader. A brief narrative is presented describing the general characteristics of the passenger typology and introduces a fictional person or group of people to represent the typology. One of the unique elements of this document is the diagram for each passenger typology that describe a sequential experience of the passenger's journey through each airport space. Each

diagram not only documents the passenger's journey through the airport, but also describes possible emotions and thoughts the passenger might experience at each phase.

Overall, this section demonstrates the successful involvement of the community in the beginning stages of guideline development. It emphasizes the importance of obtaining real passenger feedback in order to better understand the airport's spaces and of starting conversations about how these spaces can change and how they can enhance the passenger experience. The Passenger Experience section also demonstrates the successful transmission of information through storytelling. The narratives and graphics of the journey diagrams are not only appealing, but are also not overbearing with the information presented. Devoting a section to the airport users helps to inform airport staff, consultants, and designers of not just the essential needs of a user, but also a user's potential feelings and experiences during his or her journey through the airport.

PART III | THE DESIGN TOOLKIT

REDEFINING KAPAHULU AVENUE AS A THIRD PLACE

CHAPTER 9 | DEVELOPING THE DESIGN TOOLKIT

The existing knowledge and research presented in the previous chapters have shared valuable information concerning topics related to this project. Topics explored in the existing knowledge were key concepts and events in history that led to the formation of the American city and subsequently streets, and the perception of streets of the past and present. Once these topics were shared, learning about the distinction between space and place became the next priority. Based on what was learned, definitions of space and place were delineated for the purpose of this project. Other existing knowledge discussed was qualities that make a successful place, the third place concept, and encouraging people to perceive streets as places instead of spaces for vehicle movement. Overall, this body of knowledge was necessary for understanding the meaning of place and third place in order to learn how a street, or in this case, Kapahulu Avenue, can be redefined into a third place.

Upon reviewing the existing knowledge, further research was conducted to find existing street design methods that could possibly be applicable to Kapahulu Avenue. In addition to these street design methods, previous plans to improve the conditions of Kapahulu Avenue were also examined. Finally, five case studies of street design guidelines were chosen based on their acknowledgement of the unique characteristics of the place for the design guidelines and for making the local community a part of developing the guidelines. Using the knowledge and research presented in the previous sections of this project, a design process was created to aid in the development of the Kapahulu Avenue Design Toolkit. This process is comprised of five steps (also see Figure 34):

1. Site Analysis
2. Gather Community & Stakeholder Input
3. Define the Users
4. Define a Vision & Goals
5. Define Design Principles

The following sections describe each step and background information and concepts regarding Kapahulu Avenue moving forward into this project.

DEVELOPING THE DESIGN TOOLKIT

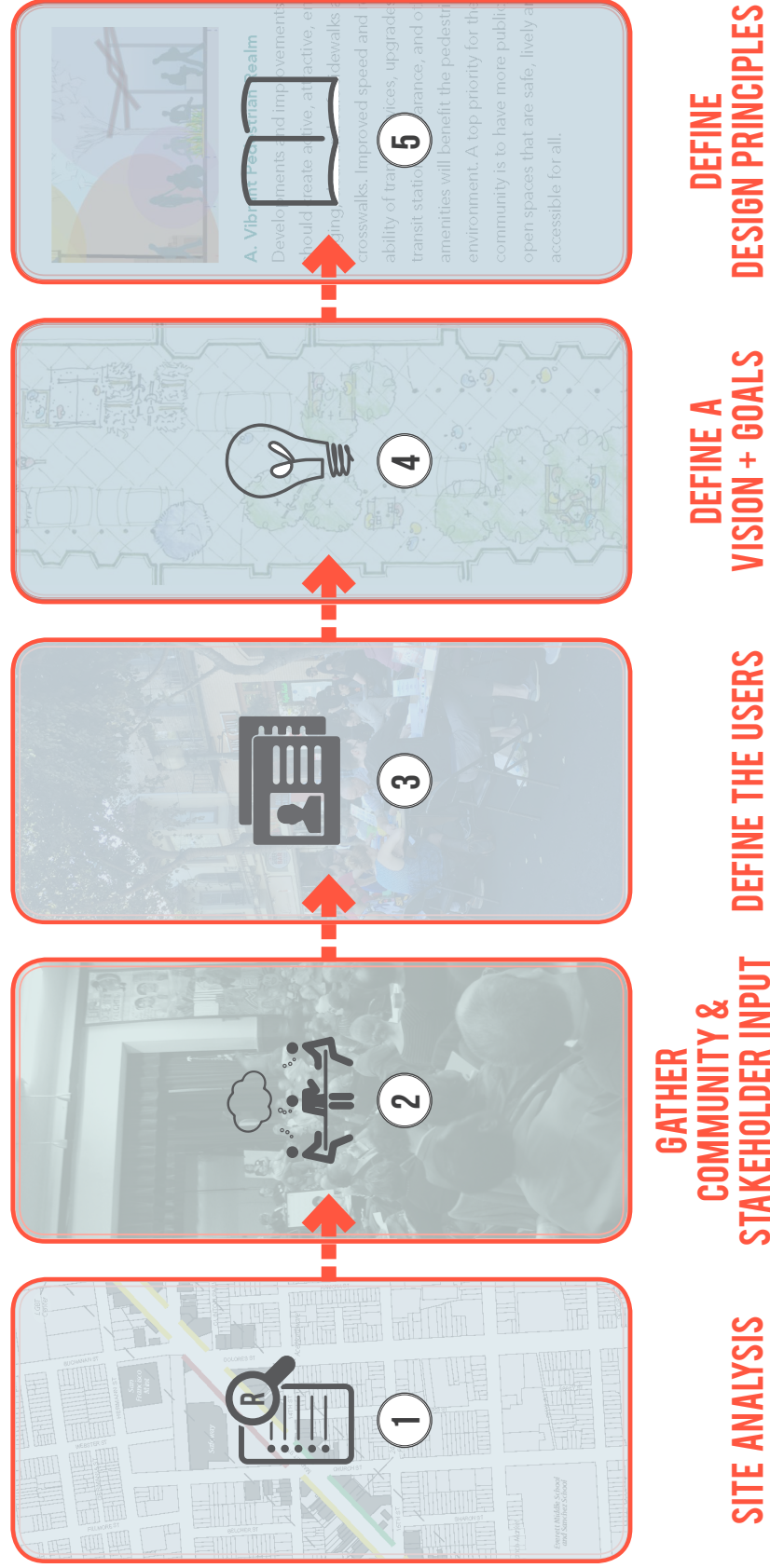


Figure 34. Process for Developing the Design Toolkit for Kapahulu Avenue
Source: Stephanie Ing, University of Hawaii at Manoa

9.1 Step #1: Site Analysis

A site analysis of the area of study is necessary to gain a better understanding of the existing conditions. Analyzing existing conditions such as physical characteristics, transportation patterns and routes, and land and building uses of the area can be helpful in determining topics to be addressed in the design toolkit. The information gained from a site analysis provides lead designers, or leaders in a community, with base information to start and lead discussions about what needs improvement in the area and measures that can be taken to improve them. Discussions such as these can be fruitful when stakeholders of the area and other consultants who have an interest in developing the area are included in these discussions.

Using the four key qualities of successful place (mentioned in chapter two) as a guide, the site analysis for this project was conducted by analyzing Kapahulu Avenue using these categories:

1. Accessibility & Linkages
2. Uses & Activities
3. Comfort & Image
4. Sociability

By splitting the site analysis into these categories, Kapahulu Avenue is analyzed as a whole (from the H-1 Freeway to the Waikiki Fire Station) to determine if its existing conditions make it presentable as a successful place. With the site analysis of Kapahulu Avenue conducted in this manner, sites along Kapahulu Avenue were selected for further investigation into their potential to become a third place. Further exploration of these sites are presented in chapter eleven. The following information and figures present the site analysis of Kapahulu Avenue for this project.

9.1.1 Site Analysis: Accessibility & Linkages

The accessibility & linkages category of the site analysis analyzes the street in terms of its accessibility to all users of the area, connectivity to the area surrounding it, and its transportation network.

Context Area Surrounding Kapahulu Avenue

Kapahulu is a neighborhood that is surrounded by a commercial residential area, Kaimuki, and by two populated tourist areas, Waikiki and Diamond Head. Kapahulu neighborhood's close proximity to these two tourist areas gives Kapahulu the potential to become a destination that attracts not just the tourists, but the local community. Kapahulu Avenue is a major thoroughfare connecting Waikiki to Kaimuki and the H-1 Freeway. The zoning and land use conditions surrounding this street is unique because this street, lined with commercial businesses, is directly surrounded by mostly residential and apartment zoned areas. Again, this gives Kapahulu Avenue an opportunity to become a place for the local community. Other notable, nearby locations surrounding this street are Kaimuki High School, the Ala Wai Golf Course and its driving range, and the Ala Wai Canal which borders the Waikiki district (see Figure 35).

Street Network

Kapahulu Avenue is considered a major arterial street connecting to a number of collector streets such as Ala Wai Boulevard, Paki Avenue, Leahi Avenue, Campbell Avenue, Date Street, Mooheau Avenue, Kaimuki Avenue, and Harding Avenue. Local streets serving the surrounding residential neighborhoods also connect to Kapahulu Avenue (see Figure 36). This main street averages daily traffic volumes between 33,000-35,000 vehicles, while the collector streets average 7,000-23,000 vehicles for their daily traffic volumes (see Figure 37). Many motorists use this street to go in and out of Waikiki. Cars and trucks are the most common vehicles on the street, however, delivery trucks were the next common vehicle to frequent the street usually traveling freeway bound out of Waikiki. Since Kapahulu is located near famous tourists spots such as Waikiki and Diamond Head, the Bus buses, tour buses, and trolleys also travel up and down Kapahulu Avenue. Based on these observations, Kapahulu Avenue is a well connected street.

Public Transportation Network

Previously stated in the section above, the city's buses (the Bus buses) and trolleys frequently travel along the street. Kapahulu Avenue supports public transportation via bus routes that connect to routes on connecting streets such as Paki Avenue, Campbell Avenue, Herbert Street, Mooheau Avenue, Date Street, Kaimuki Avenue, and Harding Avenue. A number of bus stops line Kapahulu Avenue (see Figure 38).

In addition, to buses, trolleys were also observed traveling on Kapahulu Avenue. Three trolley stops are provided on Kapahulu Avenue, but not all trolleys stop at each stop. This depends on which trolley company is chosen and which trolley route is taken.

Bicycle Facilities

Bicycle facilities and infrastructure are supported on Kapahulu Avenue, "...but, there are currently no dedicated or marked bicycle facilities"³³³ according to the May 2015 Honolulu Complete Streets Implementation Report. An existing bicycle path called the Lei of Parks Shared Use Path runs along Date Street bordering the golf course and then runs along Kapahulu Avenue separate from the street. The Oahu Bike Plan proposes that Kapahulu Avenue, in its entirety, be turned into a bicycle route marked with sharrows markings to designate lanes for vehicles and bicycles to share as it was previously mentioned in chapter seven. Other proposed paths and routes are shown in Figure 39. The lack of adequate bicycle facilities along Kapahulu Avenue results in only experienced bicyclists to use the bicycle lanes, while the inexperienced bicyclists resort to using the sidewalk where they have to be alert and slow down for pedestrians. This not only presents safety issues for the bicyclists, but also the pedestrians.

³³³ SSFM International, Blue Zones, Gary Toth Associates, *Honolulu Complete Streets Implementation Study Location Report: Kapahulu Avenue from Kaimuki Avenue to Date Street (DRAFT II)*, (2015), accessed January 19, 2016, https://www.honolulu.gov/rep/site/dts/dts_docs/150918_CSIS_Kapahulu_Kaimuki_Draft_v2.pdf, 3.

Pedestrian Facilities

Sidewalks are provided along Kapahulu Avenue and a majority of the collector streets, but one area of the residential neighborhoods in Kapahulu is not equipped with sidewalks (see Figure 40). The sidewalk widths of Kapahulu Avenue range from wide sidewalks measuring 8 feet wide to narrow sidewalks measuring 3 feet wide. This range in widths occurs throughout the entire stretch of the street. While some of the sidewalks are 8 feet wide, the clear space for walking is reduced due to utilities, newsstands, bicycle racks, landscaping and street trees present on the sidewalk.

Kapahulu Avenue is a street with a diagonal alignment (discussed in chapter seven). Determined in the analysis of the street network of this street, Kapahulu Avenue is well connected to other collector and local streets and therefore means that many streets intersect it. A marked crosswalk is provided at each intersection with the major intersections having signaled crosswalks. Some Crosswalks are uncomfortably long due to the diagonal alignment of the street in relation to the intersecting streets. For more information on this condition refer to chapter seven's examination of the Honolulu Complete Streets Implementation Study Location Reports for Kapahulu Avenue.

Parking Options

Kapahulu Avenue is equipped with different parking options since this street is heavily used by personal cars and trucks. Parking types provided along this street include a few small parking structures (rooftop and underground), a pay to park parking lot, on-street parking scattered along the whole street, parking stalls fronting buildings, and even parking in the vacant lot at the corner of Winam Avenue and Kapahulu Avenue (see Figure 41). On-street parking in this area is mainly used by customers of store and business owners. Due to a limited number of driveways and dedicated parking lots for customers, on-street parking is more abundant on the west side of the stretch of Kapahulu Avenue near the golf course. While parking appears to be abundant at certain points along Kapahulu Avenue, residents and store owners of the area claim parking is always in demand.

Walkability of Kapahulu Avenue

In Figure 42, three sites along Kapahulu Avenue (the three sites presented in chapter eleven) were chosen to display a five minute walking radius. Based on this diagram, Kapahulu Avenue seems to be walkable in terms of the time it takes to get from one end of the street to the other, which is about 20-25 minutes. The walkability of this street is further supported by the walk scores given at certain areas of Kapahulu Avenue. Based on the walk scores shown in Figure 43, Kapahulu Avenue is mostly very walkable where most errands can be done with walking. The transit score rates public transportation in the area. Kapahulu Avenue's transit score is considered good transit meaning the street has a number of public transportation options within close proximity. The bike score for Kapahulu Avenue reveals that the street is bikable meaning that some bike infrastructure is provided.

Based on this walkability analysis, Kapahulu Avenue is a walkable street in terms of the time it takes to walk this long stretch of the street and its convenient location to amenities within a 30 minute walk.



Figure 35. Modified Google Earth Image, Kapahulu Avenue Context Map,
Source: Stephanie Ing, University of Hawaii at Manoa

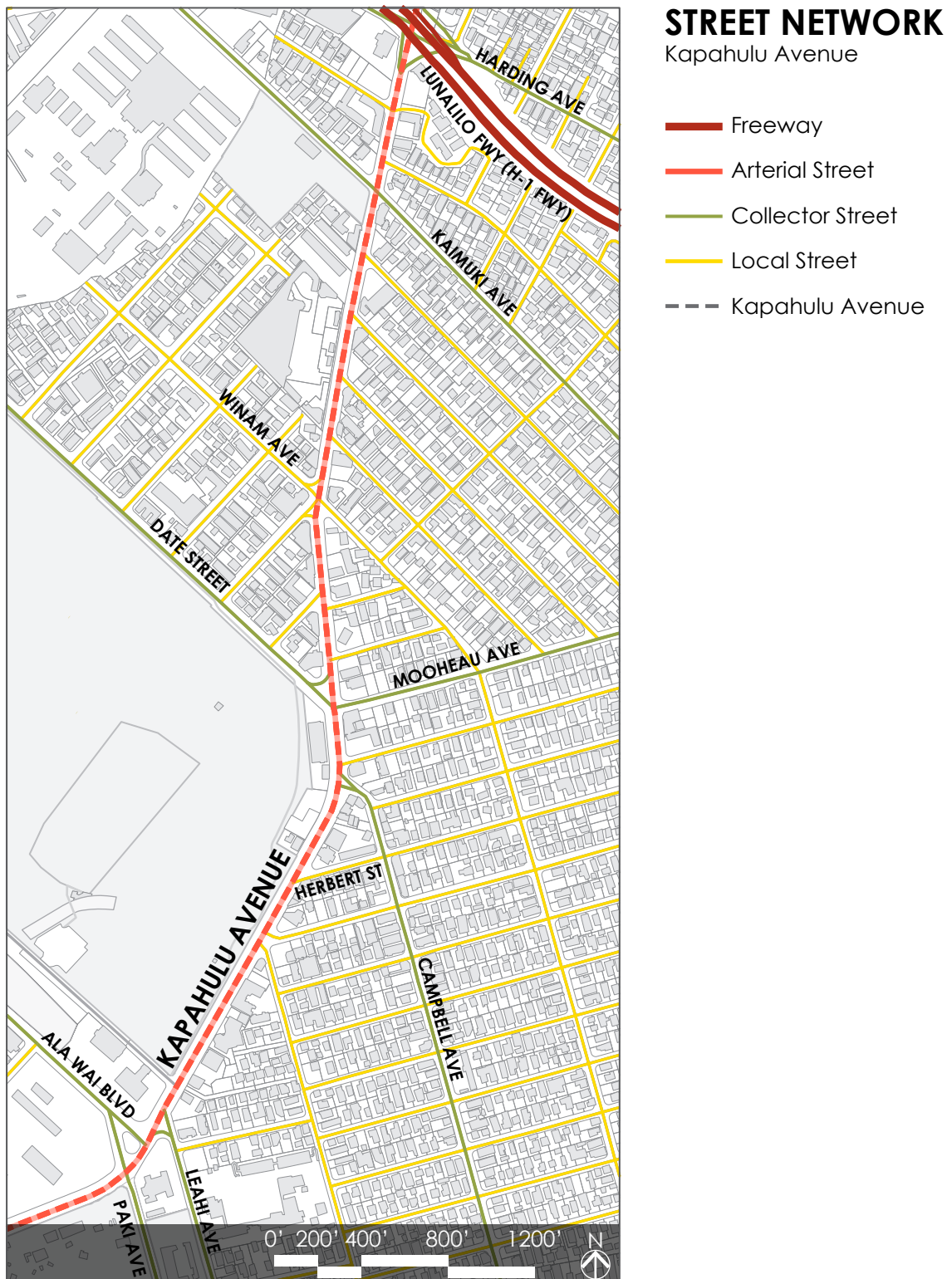


Figure 36. Street Network Analysis for Kapahulu Avenue
 Source: Stephanie Ing, University of Hawaii at Manoa

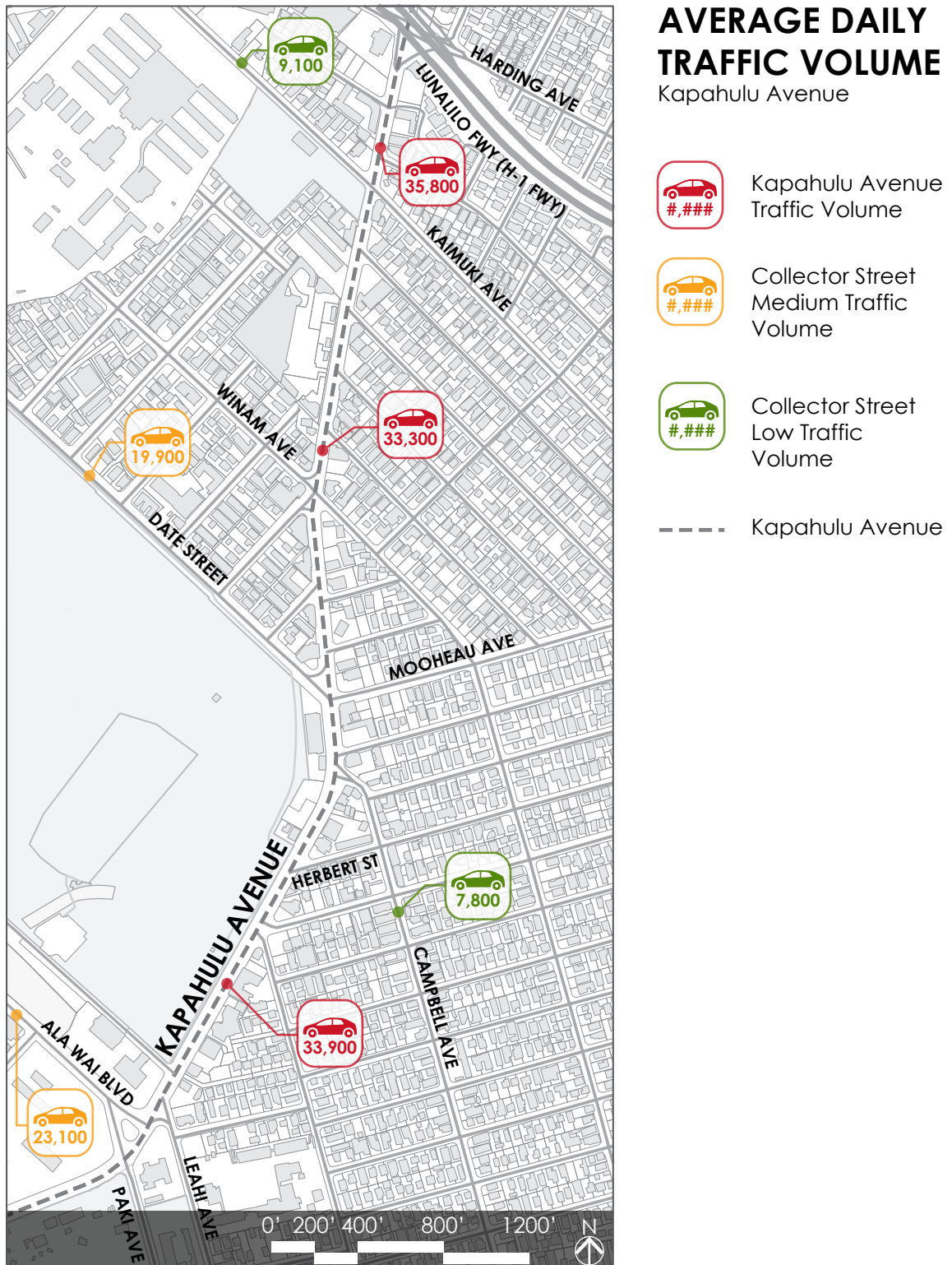


Figure 37. Average Daily Traffic Volume around Kapahulu,
Source: Stephanie Ing, University of Hawaii at Manoa

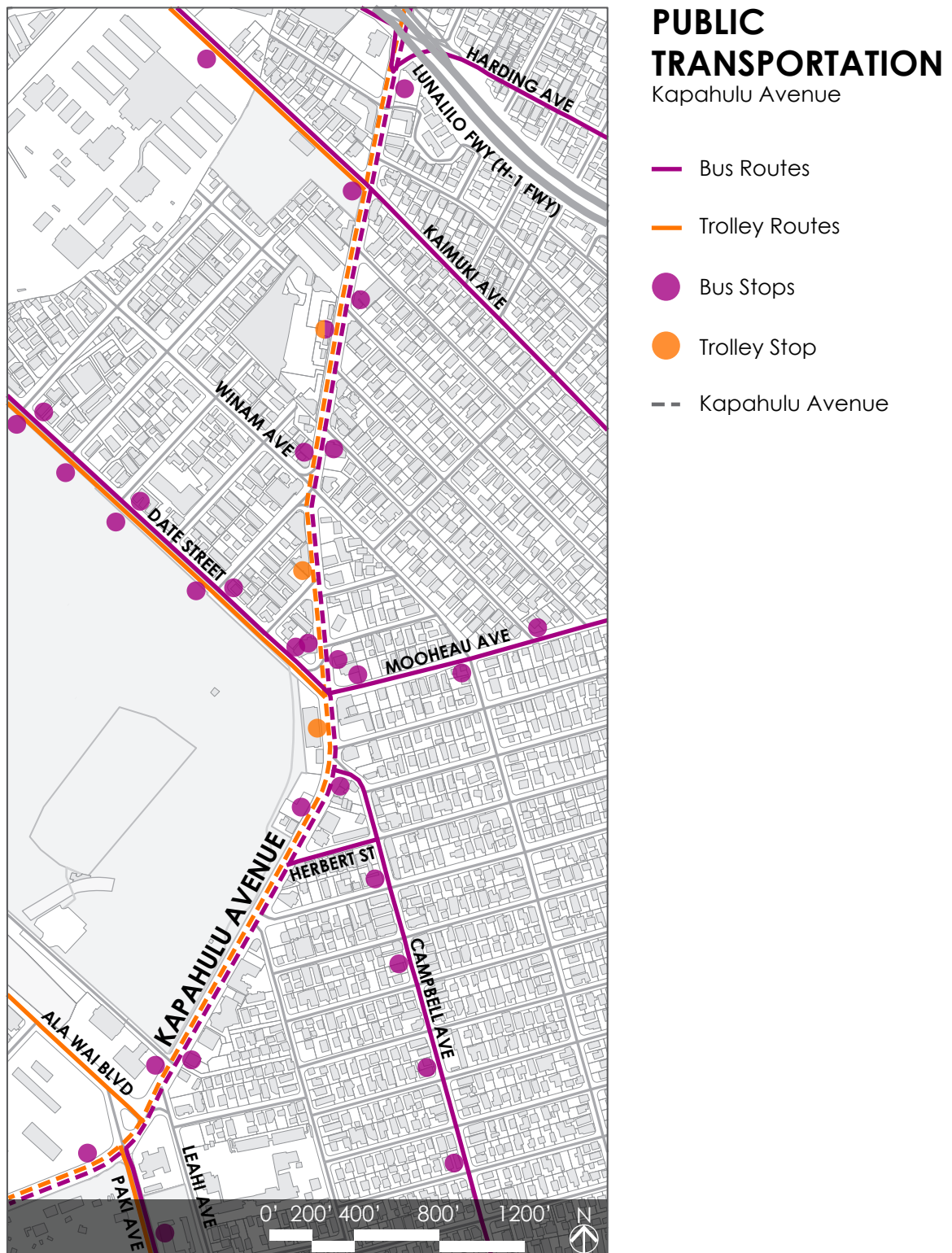


Figure 38. Public Transportation Analysis for Kapahulu Avenue
Source: Stephanie Ing, University of Hawaii at Manoa

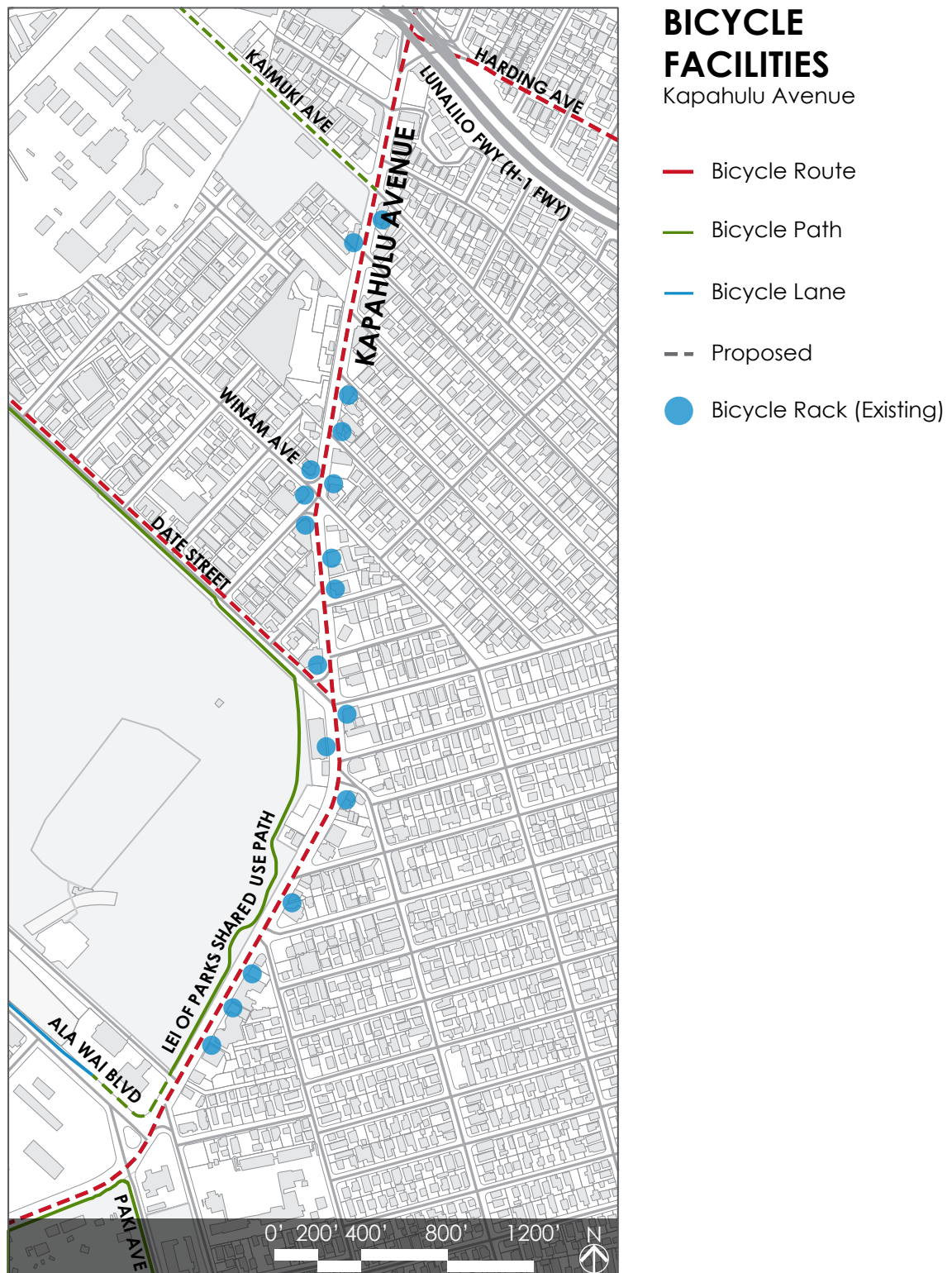


Figure 39. Bicycle Facilities Analysis of Kapahulu Avenue
Source: Stephanie Ing, University of Hawaii at Manoa



Figure 40. Pedestrian Facilities Analysis of Kapahulu Avenue
Source: Stephanie Ing, University of Hawaii at Manoa

PARKING STRUCTURES



Under ground parking structure



Parking on rooftop at Safeway

PARKING LOTS



Pay to Park parking lot



Parking lot across from Safeway

ON-STREET PARKING



Parking in front of restaurants



Parking by Ala Wai Golf Course

PARKING FRONTING BUILDINGS



Parking in front of stores

PARKING IN VACANT LOT



Parking on vacant lot at corner of Winam Ave.

Figure 41. Parking Options on Kapahulu Avenue,
Source: Stephanie Ing, Kapahulu Avenue

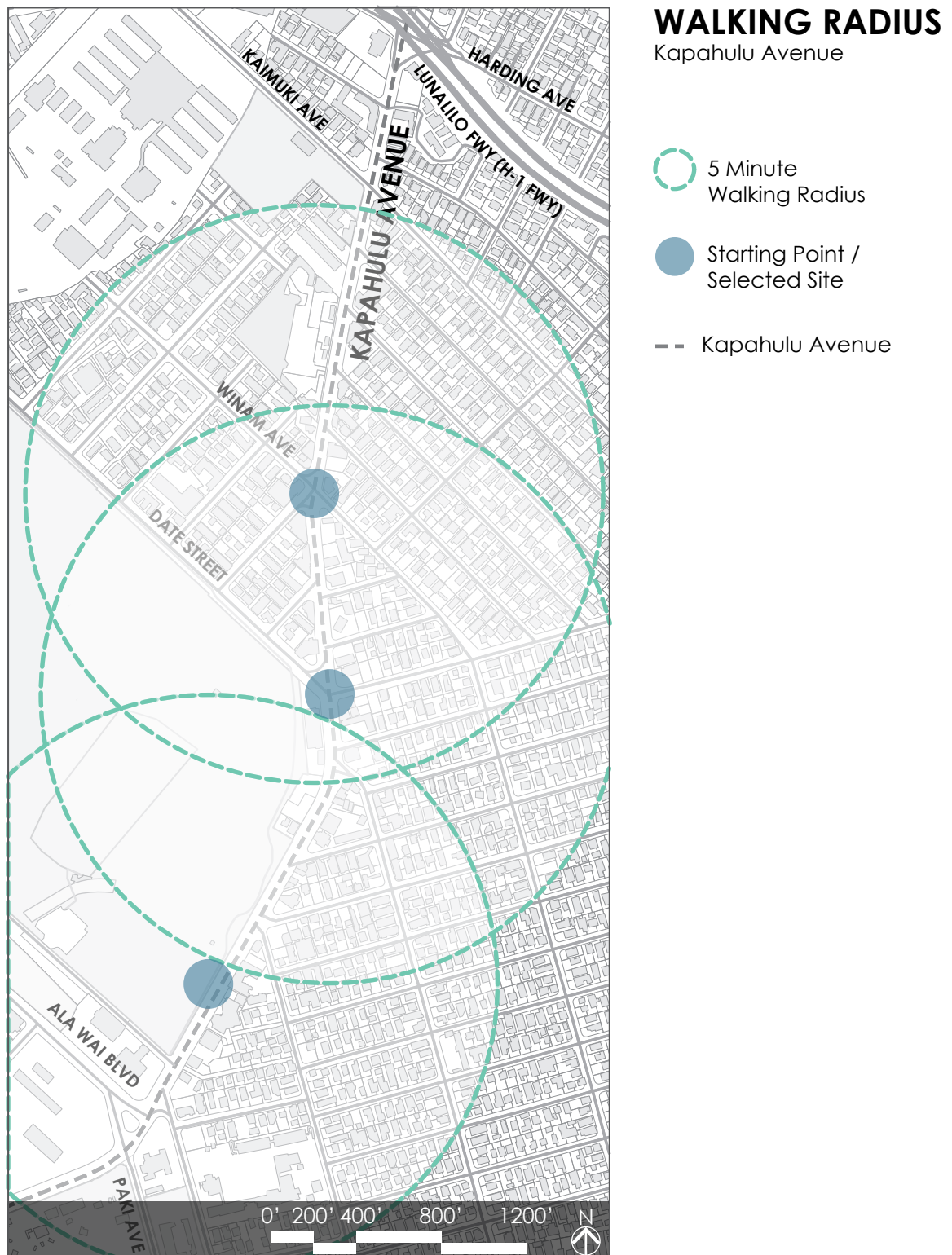


Figure 42. Walking Radius Analysis for Kapahulu Avenue
 Source: Stephanie Ing, University of Hawaii at Manoa

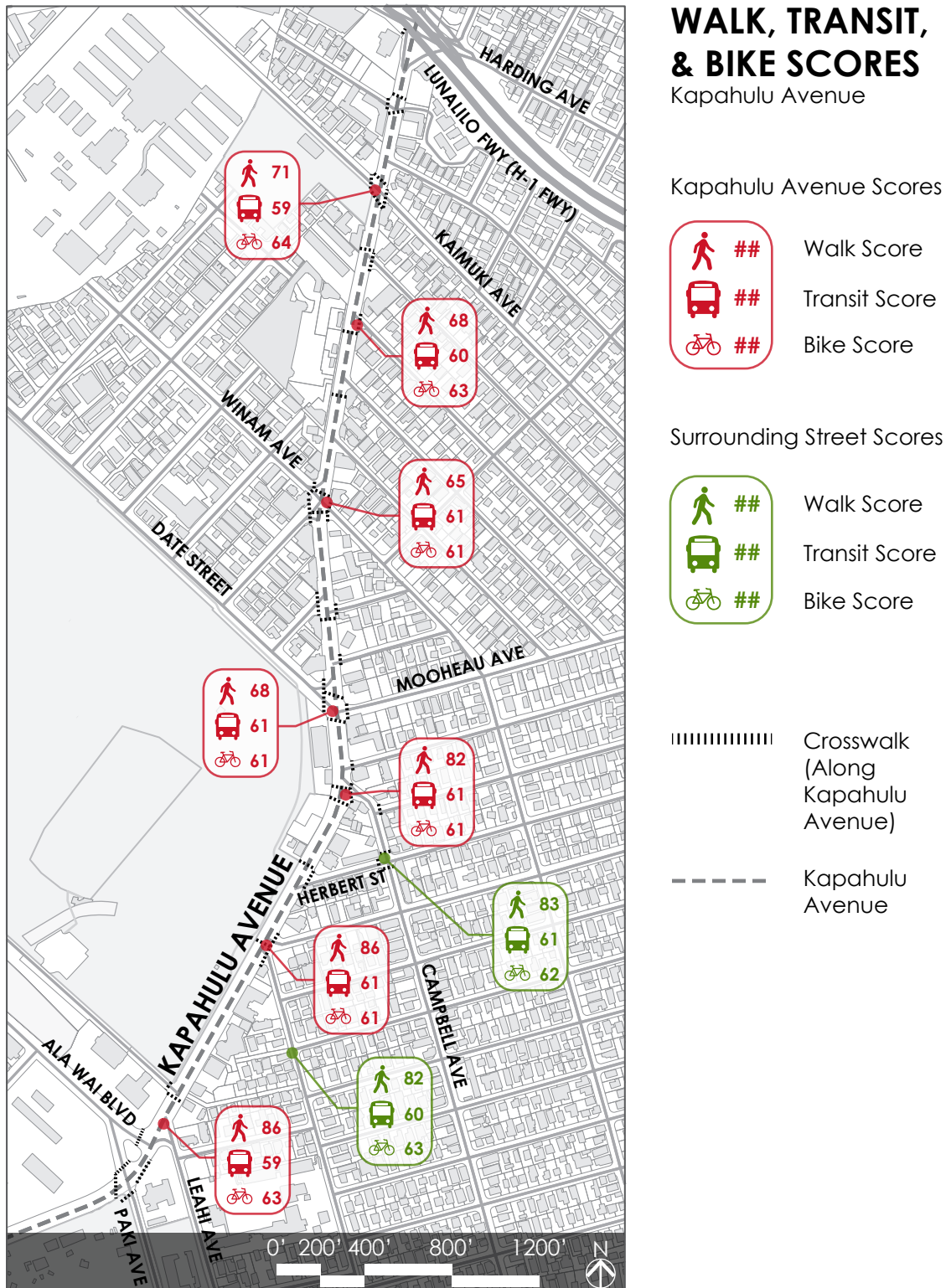


Figure 43. Walk, Transit, and Bike Scores for Kapahulu Avenue,
Source: Stephanie Ing, University of Hawaii at Manoa

9.1.2 Site Analysis: Uses & Activities

The uses & activities category of the site analysis analyzes an area for its zoning, land and building uses, and other activities that may occur. This type of site analysis is helpful in understanding existing uses of the area and what activities people are participating in. Activities could be recreational, community related, volunteer related, or recurring and seasonal events. The information gathered in this analysis is helpful when determining what design tools will be helpful in creating more opportunities for activities to take place.

Zoning

The land surrounding Kapahulu Avenue is zoned for community business. This commercial corridor, Kapahulu Avenue, is surrounded by single-family residential, medium density apartment and general preservation land zones (Crane Park and Ala Wai Golf Course), as well as a small section of a neighborhood business zone (see Figure 44). Part of Kapahulu Avenue lies within two special districts: Diamond Head Special District and the Waikiki Special District. Both special districts have their own zoning and building regulations to preserve and maintain certain characteristics of these districts. Building improvements and new developments that lie in these districts should follow their zoning ordinances and regulations.

Existing Land Use

Once again, the land surrounding Kapahulu Avenue is designated for commercial/business use. The east side of Kapahulu Avenue is designated for single-family residential use while the land on the west side of the street is designated for apartment use and multi-family residential, as well as parks/open space, and institutional use (see Figure 45). Crane Park is located near the H-1 Freeway while the Ala Wai Golf Course is a large open space that borders nearly half of the stretch of Kapahulu Avenue analyzed for this project.

Nodes of Interest

Kapahulu Avenue is lined with many commercial businesses, stores, and restaurants. Notable destinations along Kapahulu Avenue include the Waikiki-Kapahulu Public Library, Ala Wai Golf Course and its driving range, the Alawai Canal, the Lei of Parks Shared Use Path running along Date Street down Kapahulu Avenue, Safeway, and Crane Community Park (see Figure 46).

Business in the commercial corridor along Kapahulu Avenue include restaurants, cafes, fast food establishments, bars, general stores, markets, retail, tourism services, and other services such as insurance and travel. While this area has an eclectic mix businesses and services, pedestrian trips on this street are usually due to its restaurants. The Kapahulu community encourages local commercial establishments. Notable local establishments include Rainbow Drive-In, Leonard's Bakery, Haili's Hawaiian Foods, Waiola Shave Ice (located on Mokihana Street just off of Kapahulu Avenue), and Peggy's Picks (a goods store selling unique merchandise and trinkets) (see Figure 47). Big box commercial establishments are slowly moving in the area where in some cases, for example Safeway, existing buildings are torn down and rebuilt. Notable big box commercial establishments on Kapahulu Avenue are Safeway, Popeye's, Jack in the Box, Starbucks and Jamba Juice, Papa John's and Taco Bell (see Figure 48).

Activities in the Area

Based off of observations conducted around Kapahulu, recurring activities of the people include eating and gathering at restaurants and cafes and recreational activities. Recreation activities include walking, running, and bicycling mostly occurring on the Lei of Parks Shared Use Path. Other recreational activities such as basketball, and social gatherings occur at Crane Community Park.

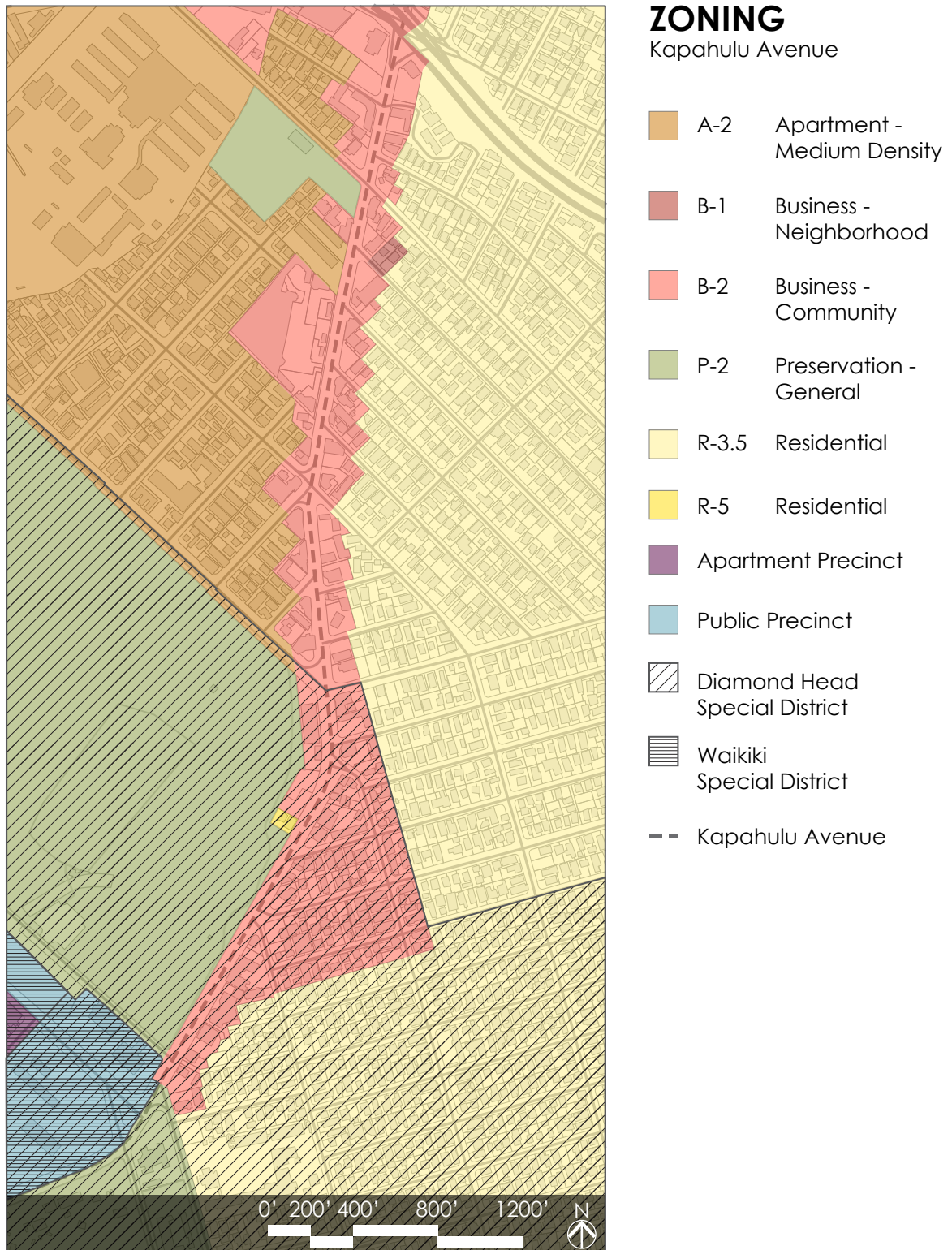


Figure 44. Zoning of Kapahulu Avenue,
Source: Stephanie Ing, University of Hawaii at Manoa

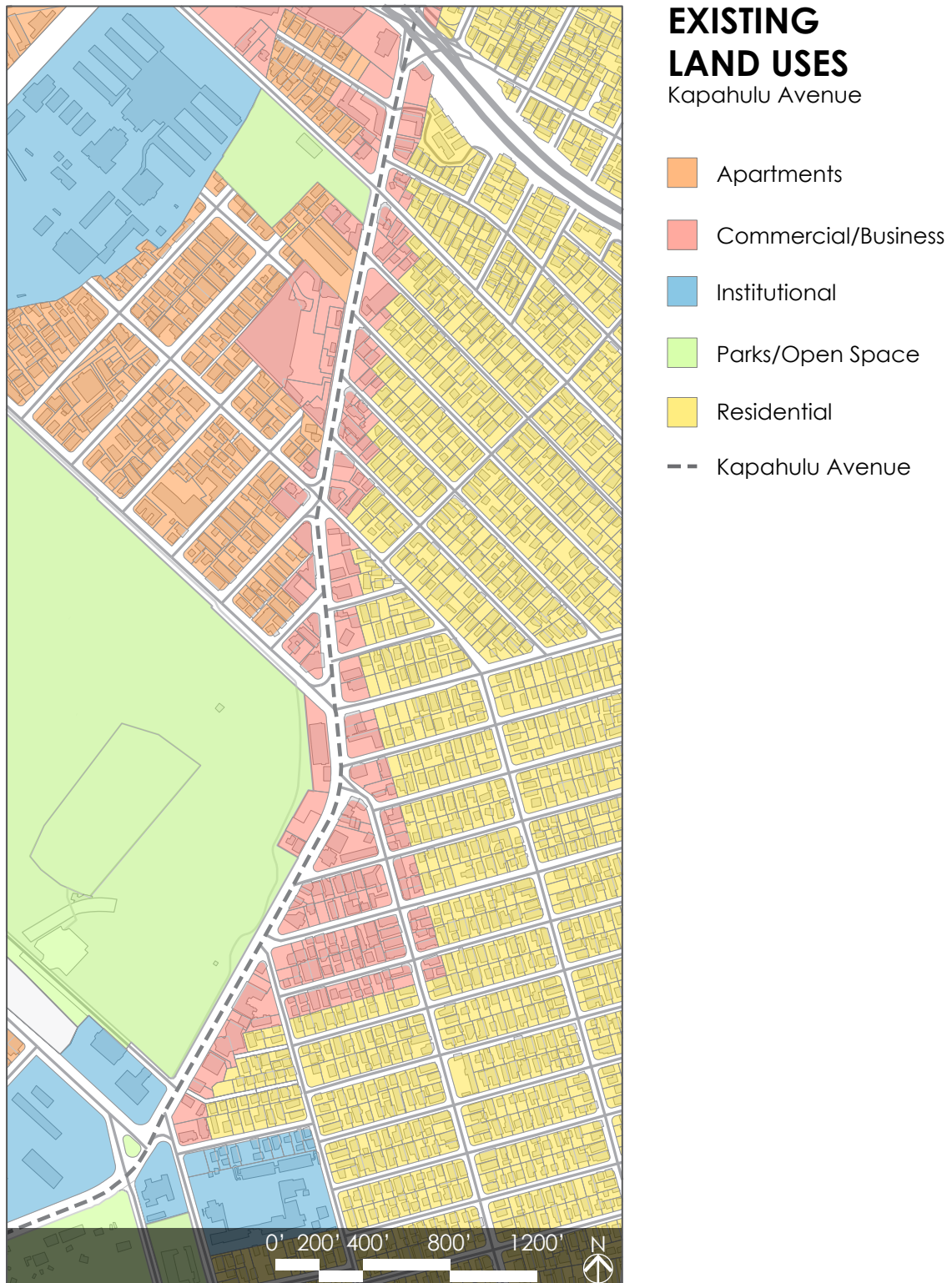


Figure 45. Existing Land Uses of Kapahulu Avenue,
Source: Stephanie Ing, University of Hawaii at Manoa

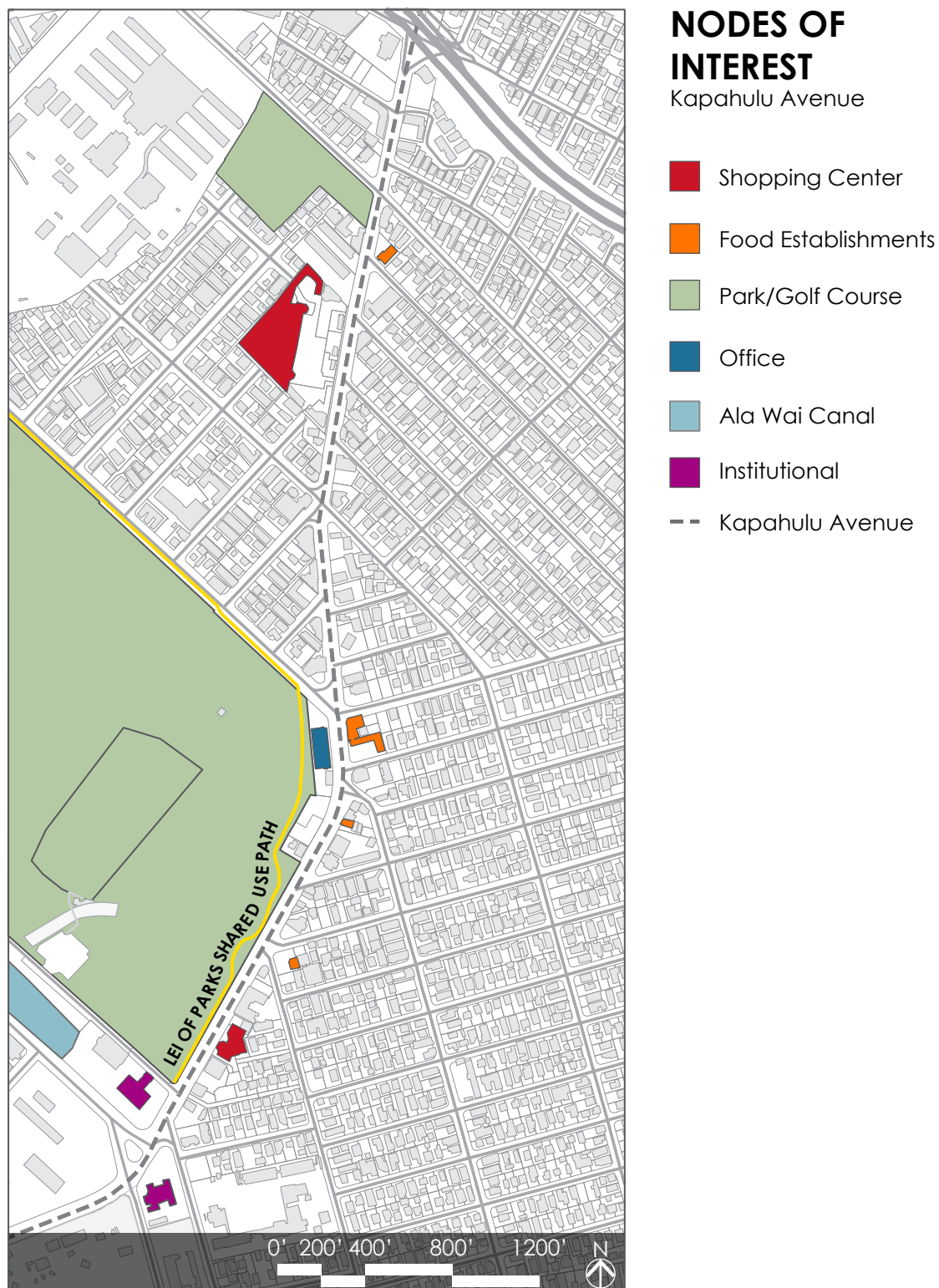


Figure 46. Nodes of Interest on Kapahulu Avenue,
Source: Stephanie Ing, University of Hawaii at Manoa

NOTABLE LOCAL ESABLISHMENTS



Rainbow Drive-In



Leonard's Bakery



Peggy's Picks



Haili's Hawaiian Foods



Waiola Shave Ice

Figure 47. Notable Local Establishments on Kapahulu Avenue,
Source: Stephanie Ing, Kapahulu Avenue

NOTABLE BIG BOX COMMERCIAL ESTABLISHMENTS



Safeway



Popeye's and Jack in the Box



Starbucks and Jamba Juice



Papa John's Pizza



Taco Bell

Figure 48. Notable Big Box Commercial Establishments on Kapahulu Avenue,
Source: Stephanie Ing, Kapahulu Avenue

9.1.3 Site Analysis: Comfort & Image

The comfort & image category of the site analysis analyzes an area for its appearance, comfort, and safety. Information collected in this analysis includes the history of the area, its attractiveness as a place in terms of building maintenance and cleanliness of the street and surrounding areas, how well lit is the area, shading opportunities in the area, and number of seating opportunities. This type of site analysis will help to determine if the area's existing conditions provide people with the comfort and safety they need to linger in a place and return to it as well. The information gathered here is helpful when determining design tools that will help enhance the comfort and image of this place.

History of Kapahulu

The Kapahulu neighborhood is one of the oldest communities in Honolulu home to commercial establishments along Kapahulu Avenue surrounded by residential areas. In ancient times, before the area's urban development, the land where the Ala Wai Golf Course is located was once used as a burial site for common graves. Additionally, the land from the "...Waikiki-Kapahulu [Public] Library to the Ala Wai Golf Course was used for large mass burials"³³⁴ until the 19th century according to the Kapahulu Community Plan Phase I Improvements document. Later, "...the site of the Ala Wai Golf Course was used as a fairground and for pastures."³³⁵ In its modern history, Kapahulu Avenue was once home to the Kapahulu Theater which no longer exists today. The land of the existing Prudential Locations building (the old Hawaiian Dredging building) was the location of a large parking lot servicing the Kapahulu Theater.³³⁶

³³⁴ City & county of Honolulu Department of Design and Construction, and PlanPacific, Inc., *Kapahulu Community Plan, Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, (2001), accessed April 28, 2015.
http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf, 2-8.

³³⁵ Ibid.

³³⁶ Ibid.

Architecture of Kapahulu

The buildings along Kapahulu Avenue and within the neighborhood encompass various styles and eras of architecture. Some of the businesses located on this street have roots dating back to the time when Hawaii was still a territory. Mike Leidemann, writes in his article "Kapahulu's past can shape its future" that "[t]he Kapahulu Center and many homes date to the 1920s."³³⁷

Building types in this area include single-family residential homes, apartment complexes, two-story apartments, and storefronts. The buildings that line Kapahulu Avenue are of a smaller scale with most buildings being two stories tall. Occasionally buildings are one or three stories, with the exception of the apartment complexes which are taller.

A range of architectural styles that are found in this area. The architectural styles of the commercial buildings along Kapahulu Avenue include historic styles like "...Art Deco, Art Moderne and streamlined Moderne commercial buildings" according to Leidemann. Other historic architecture styles in the neighborhood are Hawaiian plantation style and Craftsman bungalow homes. Architectural elements of the Mission and Tudor styles are also present in some of the buildings.³³⁸ The area is home to sixty-eight historic buildings (catalogued by the University of Hawai'i at Mānoa's American Studies classes). Another survey conducted by University of Hawaii at Manoa historic preservation students revealed Kapahulu has "...more than 100 commercial buildings, private residences and apartment complexes that are at least 50 years old in the neighborhood's areas they've been able to survey"³³⁹ according to Leidemann.

Over the years businesses have moved in and out of the buildings lining Kapahulu Avenue. Big box commercial establishments have been moving in along the street and in some cases, the owners of these establishments choose to tear down what is existing and construct a new building that is not sensitive to the architectural styles of the area. This tearing down and construction of new buildings

³³⁷ Mike Leidemann, "Kapahulu's past can shape its future," *Honolulu Advertiser*, June 19, 2004, accessed December 28, 2014, <http://the.honoluluadvertiser.com/article/2004/Jun/19/In/In13a.html>.

³³⁸ Ibid.

³³⁹ Ibid.

along Kapahulu Avenue have some local community members concerned with the preservation of the area's historic buildings. With this said, there is a need to encourage reusing and restoring the existing historic buildings and a need to encourage the building of context sensitive architecture for stakeholders who wish to make improvements or new developments along the street. Overall, Kapahulu has an eclectic collection of architecture that only adds to the character of the place. This character should be embraced by those in the community as it adds to this area's sense of place.

Safety of Kapahulu Avenue

The posted speed limit on Kapahulu Avenue is 25 mph, but motorists usually travel at higher speeds. When traveling from Waikiki towards the freeway, Kapahulu Avenue starts with six lanes for traffic which merges into four lanes after the Date Street intersection. This bottlenecking of the street near the freeway causes traffic congestion and noise and presents increased chances of traffic accidents. The intersections with the most traffic accidents are the intersections at Kapahulu Avenue and Kaimuki Avenue and Kapahulu Avenue and Date Street (see Figure 49). Other safety issues related to long crosswalks, lighting, bicycle, and pedestrian safety can be reviewed in chapter seven's discussion about the findings of the walking audits and in the accessibility & linkages section of this site analysis.

Greenery of Kapahulu Avenue

Kapahulu Avenue has different types of greenery (see Figure 50) which remain concentrated on different sections of the street. The section of Kapahulu Avenue approaching the freeway has a lack of greenery while the section bordering the Ala Wai Golf Course is abundant in greenery which includes a grassy area, street trees, and larger streets.

Large canopy trees can be found at Crane Community Park and the channelization islands at intersections of Kapahulu Avenue at Palani Avenue, Date Street, and Leahi Avenue. Street trees are scattered along the avenue. Other types of greenery found along Kapahulu Avenue is landscaping, shrubs, and grassy buffers between the sidewalk and the street.

Shading on Kapahulu Avenue

Shading along Kapahulu avenue is provided by either the canopy and street trees, the overhangs of the building, or awnings attached to the buildings (see Figure 51). Shading for the sidewalks along the street is concentrated at different sections of Kapahulu Avenue. This is due to buildings being set back from the sidewalk or a lack of trees next to the sidewalks. The lack of shading at these sections of the street can make these areas uncomfortable for people on hot, humid, and rainy days.

Outdoor Seating on Kapahulu Avenue

Outdoor seating on Kapahulu Avenue is rare. Besides bus stop seating and park benches at Crane Community Park. Kaimana Farm Cafe, Taco Bell, and Ono Seafood Products are three eateries that provide outdoor seating for their customers (see Figure 52); however, it has been observed that the customers rarely take advantage of the opportunity to sit outside. Reasons for this is due to low comfort of these areas due to constricted sidewalk space near these seats, a concern for safety (for Ono Seafood Products since the outdoor seating space borders a parking lot), and not enough shade provided. Most of the outdoor seating is fixed seating giving customers less flexibility to make themselves more comfortable for a longer stay.

Personalization of the Storefronts on Kapahulu Avenue

Part of what makes Kapahulu Avenue unique is the personalization of some of the storefronts (see Figure 53). Most storefronts have unique paint jobs that make them stand out from one another. Some business paint their storefronts with bright colors, while others welcome murals and graffiti art. Other storefronts apply different building materials to their storefronts such as the wooden planks on the facade of Kaimana Farm Cafe. The Irifune restaurant displays potted plants at their storefront.

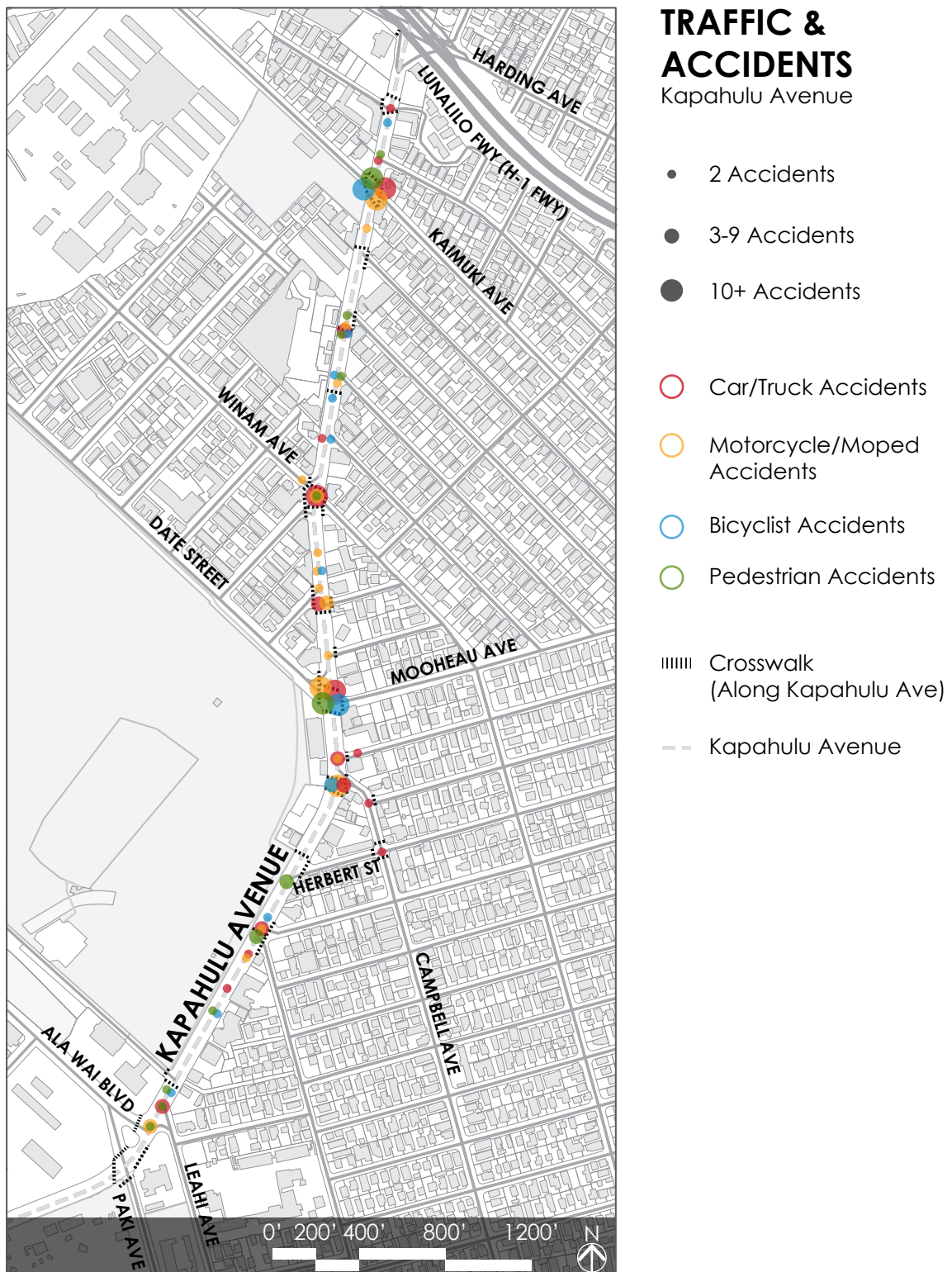


Figure 49. Traffic Accidents on Kapahulu Avenue,
Source: Stephanie Ing, University of Hawaii at Manoa

LARGE CANOPY TREES



Canopy tree at Date Street channelization island

GRASS & TREES LINING SIDEWALKS



Sidewalk by Ala Wai Golf Course

SMALLER TREES



Small trees near American Savings Bank

SHRUBS



Shrubs at Winam Avenue channelization island

LANDSCAPING



Landscaping fronting Papa Johns

GRASS PATCHES



Grass patch near Tesoro Gas Station

Figure 50. Types of Greenery on Kapahulu Avenue,
Source: Stephanie Ing, Kapahulu Avenue

OVERHANGS



Overhang shading sidewalk on Kapahulu Avenue



Overhang at On Stage building



Overhang by shading outdoor seating



Overhang shading sidewalk

AWNINGS



Awning at Panda Express



Awning at building along Kapahulu Avenue

Figure 51. Shading by Architecture on Kapahulu Avenue,
Source: Stephanie Ing, Kapahulu Avenue

OUTDOOR SEATING



Seating outside by bus stop



Seating at Kaimana Farm Cafe



Park benches at Crane Community Park



Seating outside Ono Seafood Products



Seating at Taco Bell

Figure 52. Outdoor Seating on Kapahulu Avenue,
Source: Stephanie Ing, Kapahulu Avenue

PERSONALIZATION



Storefront of Kaimana Farm Cafe



Storefront of Waiola Shave Ice



Storefront of Diamond Head Surfboards



Mural on Go Bananas Store



Graffiti art on the building facade

Figure 53. Personalization of Storefronts on Kapahulu Avenue,
Source: Stephanie Ing, Kapahulu Avenue

9.1.4 Site Analysis: Sociability

The sociability category of the site analysis looks at a place for its potential to allow people to gather and socialize. This part of the site analysis relies on observations of people and their actions and how they interact with each other. Factors that contribute to a place's sociability is its comfort, its accessibility for all types of people, and its appearance or image. All these factors have been covered in the previous sections. This category is helpful in identifying third places.

Populated Places on Kapahulu Avenue

Many people come to Kapahulu for the eateries or to go to the Safeway shopping complex to buy groceries. Populated places along Kapahulu Avenue are shown in Figure 54 and Figure 55. These places are some of the most frequented places along Kapahulu Avenue, but can they be considered third places?

Existing Third Places on Kapahulu Avenue

While the places shown in Figure 54 and Figure 55 are some of the more populated places on Kapahulu Avenue, they are not all considered a third place. Reasons for this is that some of these places service certain types of customers or they do not have the facilities or space for people to gather and socialize for long periods of time, or the space may not be able to support a variety of activities people can do or participate in. With these parameters in mind, this project identifies Starbucks and its outdoor seating area and the Waikiki-Kapahulu Public Library as third places on Kapahulu Avenue. These two places support gatherings and socialization to all users throughout the day. Other potential third places in this area are Zippy's Restaurant and Crane Community Park.

POPULATED PLACES



Shopping Center towards H-1 Freeway



Shopping Complex at Diamond Head side



Leonard's Bakery



Crane Community Park



Zippy's

Figure 54. Populated Places on Kapahulu Avenue (1),
Source: Stephanie Ing, Kapahulu Avenue

POPULATED PLACES



Starbucks and surrounding businesses



Rainbow Drive-In



On Stage



Fast Food Restaurants



Waikiki-Kapahulu Public Library

Figure 55. Populated Places on Kapahulu Avenue (2),
Source: Stephanie Ing, Kapahulu Avenue

9.2 Step #2: Community & Stakeholder Input

The next step in this process is to collect input from the local community and stakeholders of the area. Collecting this input will help designers, consultants, and developers understand what the community and stakeholders want and need. This type of input will also help the design team understand the project area from the perspective of the users in the area. The input obtained in this step will help with the following steps in this design toolkit development process.

One of the more effective ways to collect community input is to conduct a series of community workshops, surveys and interviews. Planners, designers, the local community, and stakeholders would be involved in these workshops where lead designers would start and guide the workshops. Exercises and discussions can be part of the process for drawing out the community's vision and their goals for their neighborhood. By doing these workshops with the community, all parties may have a sense of ownership in the design of the area.

Although these methods are direct and effective ways of gathering information from the community, other methods of gathering community and stakeholder input may also be employed. Possible sources for this type of information can be collected from these sources:

- neighborhood reports
- neighborhood meetings
- newspaper and magazine articles
- websites
- existing plans for improvements
- observing the actions of people in their environment

Due to the time constraints of this project, community workshops, surveys, and interviews will not be used in this design development process. Community and stakeholder input will be pulled from a few alternative sources to understand the community's and stakeholders' wants and needs for improvements of their area.

9.2.1 Community & Stakeholder Input for Kapahulu Avenue

In this project, community and stakeholder input regarding Kapahulu Avenue was gathered from online newspaper articles, websites, the Kapahulu Community Plan, and the two Honolulu Complete Streets Implementation Study Location Reports. This input was discussed in detail in previous chapters, therefore, the following list summarizes community and stakeholder input (from the previous chapters) for Kapahulu Avenue:

- Input Concerning the Architecture and Character of Kapahulu Avenue
 - "...[maintain] the main avenue's character..."³⁴⁰
 - "The Kapahulu Community Plan advocates that new construction and renovation of existing structures include architectural treatments that recognize and continue Kapahulu's historic street front design."³⁴¹
 - Support local businesses.
 - "Preserve and improve views of Diamond Head view as part of the neighborhood's identity."³⁴²
- Input Concerning Pedestrian Safety
 - Decrease the distance of uncomfortably long crosswalks to improve the safety of the pedestrians.
 - Wider sidewalks are desired where they are narrow.
 - Provide lighting in under lit places such as the existing Lei of Parks Shared Use Path.
- Input Concerning Traffic and Conditions of Kapahulu Avenue
 - Noise from the traffic is a concern of the residents.
 - Provide more parking for customers.

³⁴⁰ Ragnar Carlson, "Visioning Kapahulu: A new big box raises--and may answer-- questions about the meaning of community action," *Honolulu Weekly*, September 7, 2006, accessed December 28, 2014, <http://honoluluweekly.com/cover/2005/09/visioning-kapahulu/>.

³⁴¹ City & county of Honolulu Department of Design and Construction, and PlanPacific, Inc., *Kapahulu Community Plan Phase I Improvements: Final Environmental Assessment and Finding of No Significant Impact (FONSI)*, (2001), accessed April 28, 2015. http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2001-10-23-OA-FEA-KAPAHULU-COMM-PLAN-PH-I.pdf, 2-8.

³⁴² Ibid, 1-2.

- Improve the network connectivity of all travel modes.
 - Some driveways are very long and interrupt the pedestrian space.
- Input Concerning Bicycle Facilities
 - Provide bicycle lanes or protected bicycle lanes
 - The Oahu Bike Plan proposes to turn Kapahulu into a bike route marked with sharrows markings.
- Input Concerning Comfort
 - Provide more shading opportunities for people.
 - Plant more street trees for shading.
 - Provide seating for people to rest.

9.3 Step #3: Define the Users

The third step in this process is to define the users using the information gathered in steps #1 and #2. Defining the users of the project area helps design teams clarify the people they may be designing for. In this step of developing the design toolkit the wants and needs regarding what the users are hoping for in the development of their area are stated. Once again, this step can help to gain an understanding of the project area from the user's perspective.

9.3.1 Defining the Users of Kapahulu Avenue

Information about the site conditions of Kapahulu Avenue and input from the community and stakeholders of the Kapahulu area has helped in defining the users of this place. Three types of users have been defined for this project: residents, visitors, and business owners.

Residents

Kapahulu Avenue is a commercial zoned area surrounded by residential zoned areas therefore making one of the users of Kapahulu Avenue the residents of Kapahulu. Residents of this area include families, elderly people, and students. These user types are often seen visiting different venues along Kapahulu Avenue since this street provides a number of services for the local residents including a supermarket,

restaurants, cafes, places for studying (i.e. Starbucks and the Waikiki-Kapahulu Public Library), and places for recreation (i.e. Crane Community Park, the Lei of Parks Shared Use Path, and Ala Wai Golf Course). See Figure 56 to view residents' requests regarding the improvements and developments along Kapahulu Avenue.

Visitors

Kapahulu is an area neighboring the Waikiki and Diamond Head districts. Kapahulu's close proximity to these tourist areas provides an opportunity for tourists to venture into Kapahulu to explore the local area's venues. Visitors of Kapahulu include tourists and often food enthusiasts. Kapahulu Avenue is known to have a wealth of different types of eateries (restaurants, bakeries, cafes, and fast food places) which serve different types of food. People and food enthusiasts, along with the tourists and residents of Kapahulu, travel from all over the island to come to Kapahulu Avenue and enjoy the food it has to offer. To view the visitors' requests regarding improvements and developments along Kapahulu Avenue, see Figure 56.

Business Owners

The last defined users of Kapahulu (for this project) are the business owners. This type of user includes restaurant owners, store owners, and people who run tourism services. Part of what makes Kapahulu Avenue unique is its collection of a variety of local businesses. Business owners, besides other stakeholders and developers of Kapahulu, have the power to influence the appearance and image of Kapahulu Avenue. To view the business owners' requests regarding improvements and developments along Kapahulu Avenue, see Figure 56.

DEFINE THE USERS

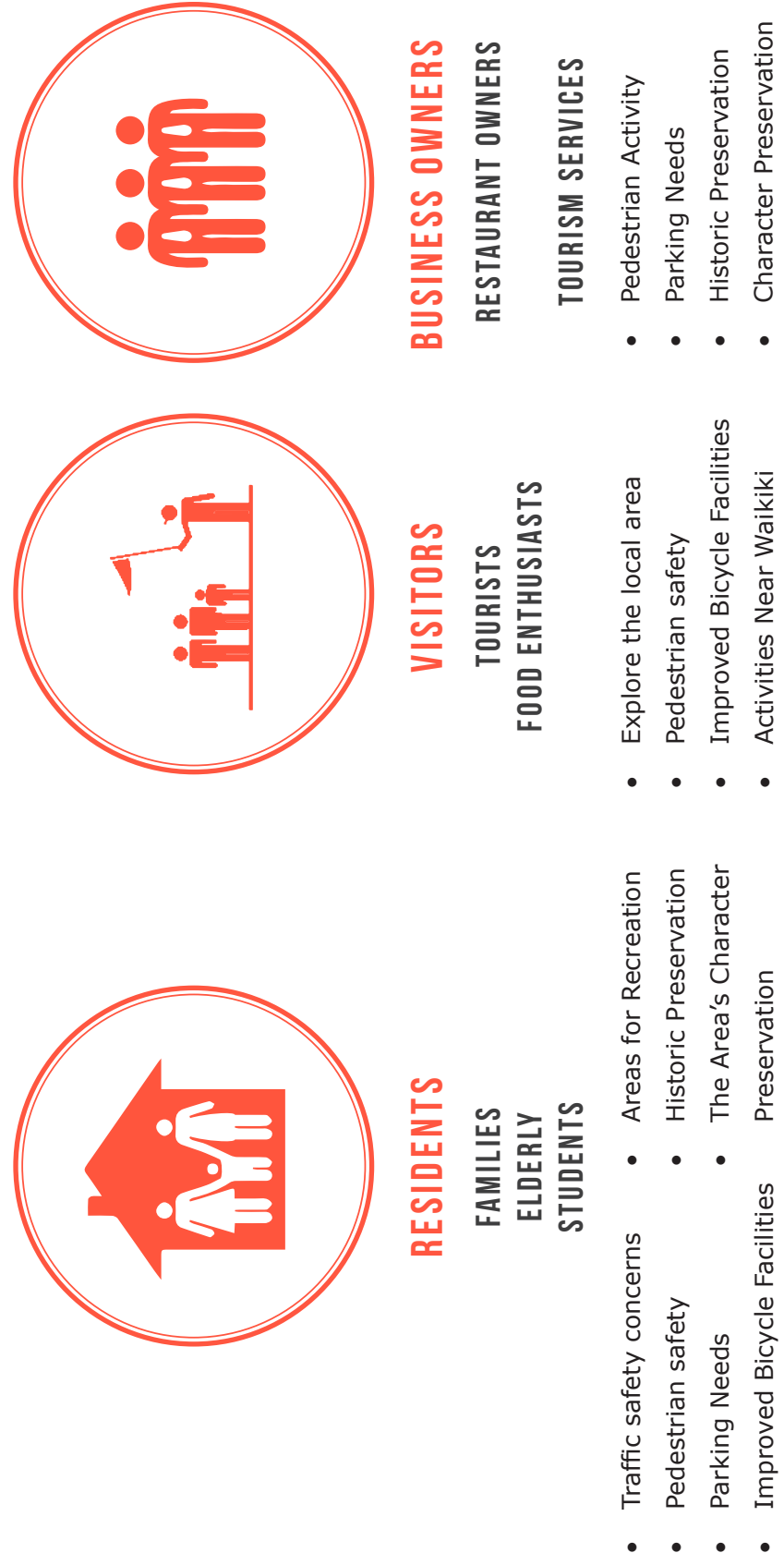


Figure 56. Users of Kapahulu Avenue,
Source: Stephanie Ing, University of Hawaii at Manoa

9.4 Step #4: Define a Vision & Goals

The fourth step of this process requires defining a vision and a set of goals for the project. A vision and goals developed with the help of the community and stakeholders provide designers and planners with ideas of what the overall community envisions for the development of their area. In doing this, the community helps to create a shared vision that they can use to inform future design teams, consultants, and developers of the shared community vision. This gives the design teams, consultants, and developers a base and a direction for future developments in the project area. Goals can be determined based off the shared community vision. These goals act as steps people may take to achieve the shared community vision.

9.4.1 Defining a Vision and Goals for Kapahulu Avenue

The Vision for Kapahulu Avenue

A vision for Kapahulu Avenue was developed for this project using the information gained about this street through research and observations. For the purpose of this project, the vision for Kapahulu Avenue will be to: create a vibrant place for the Kapahulu community. The development of this vision stems from this project's proposal to redefine the street as a third place for transforming an existing street from a space for transportation vehicles into a place for the people of the local community.

The Goals for Kapahulu Avenue

Based off this project's proposal to redefine the street as a third place, goals for Kapahulu Avenue were developed using the four key qualities of successful place and the four physical characteristics of third place as a guide. The combination of these qualities and characteristics help to create a successful third place. Using the concepts of these components of place and third place, four goals for Kapahulu were created:

- Goal #1: Celebrate the Character of the Place
- Goal #2: Active & Engaging Place
- Goal #3: Shared & Flexible Place
- Goal #4: Comfortable & Safe Place

Explanations for these four goals are mentioned in the next chapter. The chart in Figure 57 shows steps taken for developing the goals for the development of Kapahulu Avenue in addition to a design concept for connecting places along Kapahulu Avenue.

KAPAHULU VISION + GOALS

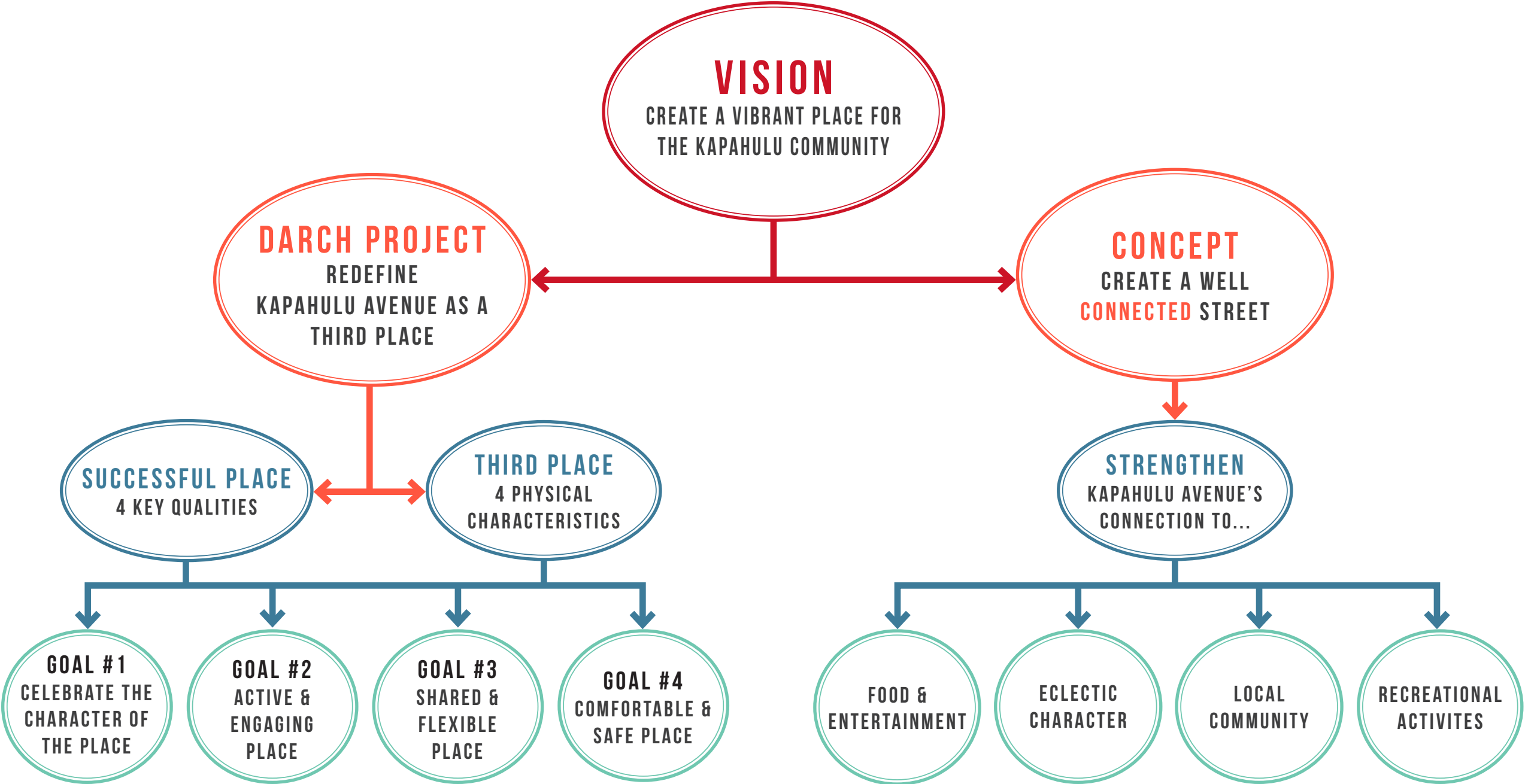


Figure 57. Kapahulu Vision and Goals Chart,
Source: Stephanie Ing, University of Hawaii at Manoa

9.5 Step #5: Define Design Principles

The last step in this process is to develop design principles. Creating these design principles for the project area becomes a base for developing a design toolkit for the area by using the design principles as a guide for picking tools that corresponds to the principles.

9.5.1 Defining Design Principles for Kapahulu Avenue

For this project, design principles were determined using the information gained about place, third place, and streets as places in order to help redefine Kapahulu Avenue into a vibrant third place. The process for arriving at the design principles for this project is shown in the chart in Figure 58. Using the design principles as a guide, design tools for the design toolkit are developed. Each design tool picked for this design toolkit correlates to one or more of the design principles.

KAPAHULU DESIGN PRINCIPLES

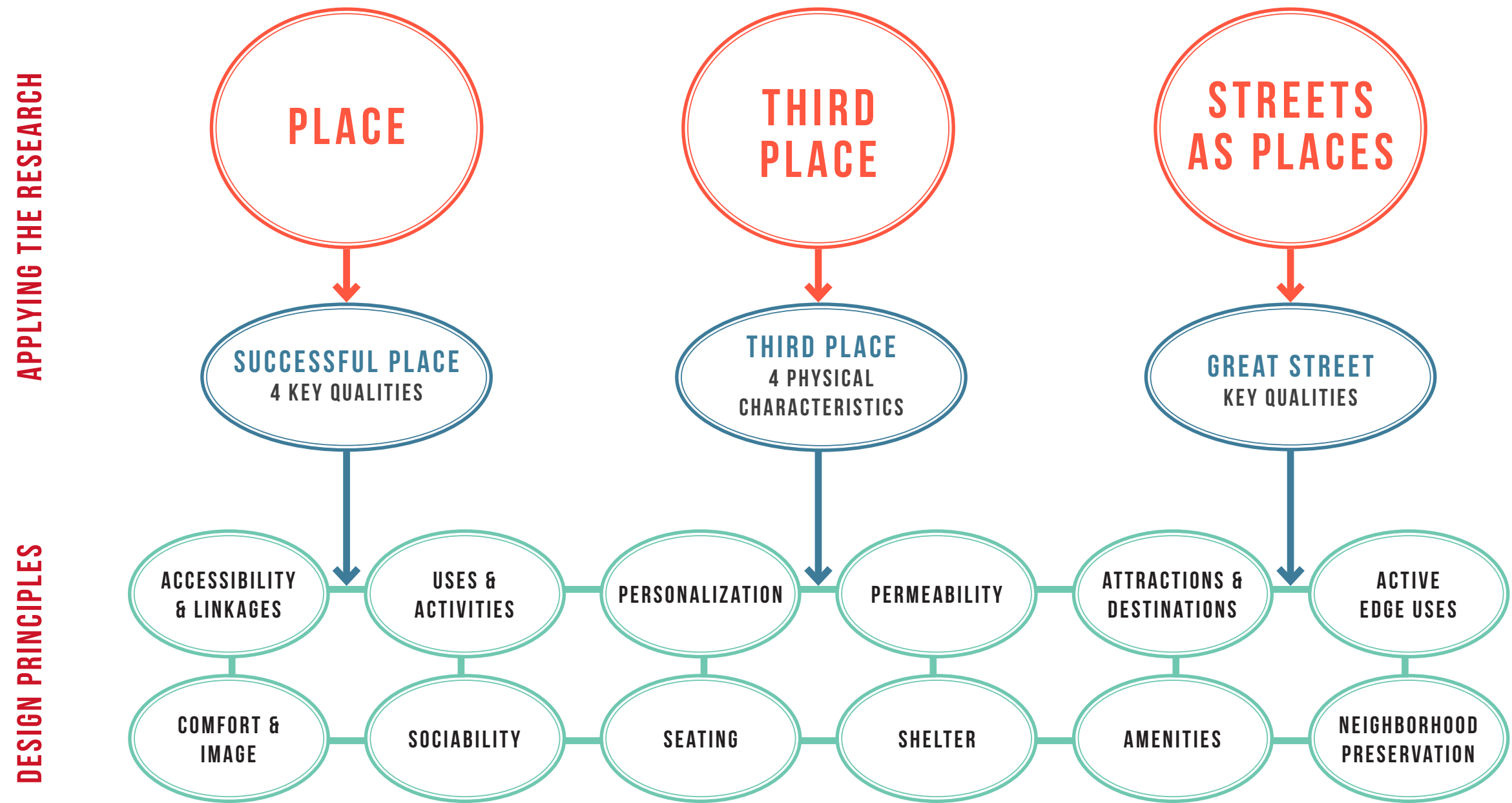


Figure 58. Kapahulu Design Principles Chart,
Source: Stephanie Ing, University of Hawaii at Manoa

CHAPTER 10 | THE KAPAHULU AVENUE DESIGN TOOLKIT

The design toolkit development process explained in chapter nine and a compilation of research presented in this project was used to help determine design tools for the Kapahulu Avenue Design Toolkit. Information regarding the concepts of place, third place, and streets as places was used to ensure the design tools are used to support redefining Kapahulu Avenue into a vibrant third place. The Kapahulu Avenue Design Toolkit was also developed based off existing plans for improvements along Kapahulu Avenue (the Complete Streets Implementation Reports, the Kapahulu Community Plan, and the Oahu Bike Plan for Kapahulu Avenue); however, this design toolkit takes redesigning this street a step further by presenting design tools that help transform sections of Kapahulu Avenue into third places that primarily serve the local community.

The design tools in this toolkit aim to enhance the experience of the users of Kapahulu Avenue and transform the street itself into a third place: a place where people come to gather and socialize separate from their homes and places of work. The Kapahulu Design Toolkit is designed to be an inspirational guide to aid the Kapahulu Community in transforming this street into a third place for their use. The following sections present four goals to be achieved for Kapahulu Avenue as a third place. Design tools are assigned to each goal to help achieve these goals.

10.1 GOAL #1: Celebrate the Character of the Place

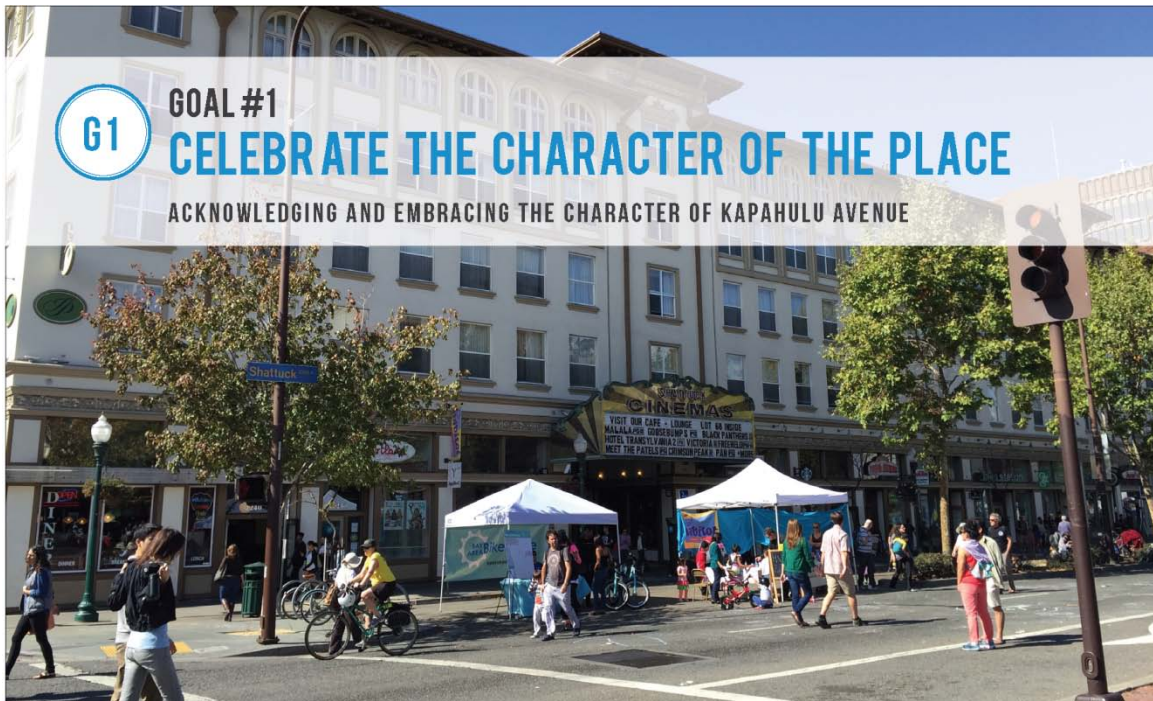


Figure 59. Goal #1: celebrate the Character of the Place

Source: Stephanie Ing, University of Hawaii at Manoa

The Kapahulu area has a diverse collection of architectural styles, food establishments, and local businesses. This eclectic atmosphere contributes to the charm and identity of the place. The design tools in this section recognize what makes this place unique and strives to preserve and strengthen its eclectic, local identity.

<div>GOAL #1</div> CELEBRATE THE CHARACTER OF THE PLACE		
DESIGN TOOLS	TOOL TYPE	THIRD PLACE CATEGORY
 TOOL #1 : CONTEXT SENSITIVE ARCHITECTURE	ARCHITECTURE	PERSONALIZATION
 TOOL #2 : CONSIDER REHABILITATING AND REUSING EXISTING BUILDINGS AND SPACES	ACTIVITIES & USES	
 TOOL #3 : CAPITALIZE ON LOCAL ASSETS		
 TOOL #4 : SUPPORT LOCAL BUSINESSES		
 TOOL #5 : MAINTAIN THE DIAMOND HEAD VIEW		

Table 1. Goal #1 Design Tools
Source: Stephanie Ing, University of Hawaii at Manoa

10.1.1 Tool #1: Context-sensitive Architecture

Place Goals: Celebrate the Character of the Place

Tool Type: Architecture

Third Place Category: Personalization

Part of what makes Kapahulu Avenue unique is the architecture of the place. Kapahulu Avenue's architecture is a collection of various styles and eras. Historic architectural styles found on Kapahulu Avenue include: Art Deco, Art Modern, and streamlined Modern commercial buildings. Many of these existing buildings are low rise buildings (1-4 stories). This scale of the buildings helps to keep the area at a human scale which helps to create a more comfortable, main street atmosphere different from the tall buildings and busy streets found in a city setting. Kapahulu Avenue does not have a dominant architectural style; however, this fact gives this Kapahulu Avenue its distinguishing character.

New developments and additions to this street are welcomed. However, community members of the area are concerned about the preservation of these historic buildings and the character of the area. To address these concerns, this design tool proposes designing context-sensitive architectural solutions when making improvements to existing buildings or constructing new buildings along Kapahulu Avenue in order to preserve its character. Design elements of the architectural styles found on this street can be used as inspiration for the design of a building. The following list is a guide for new construction and renovations on Kapahulu Avenue. This list suggests architectural forms and elements that may be applied in the design of these new developments:

- simple geometries: rectilinear building forms or simple curved forms when a building is located at the corner of an intersection
- long horizontal lines breaking up the facade (i.e. an overhang or awning)
- flat roofs
- flat overhangs (aligning with surrounding buildings)
- awnings (aligning with surrounding buildings)
- large storefront windows that align surrounding buildings

10.1.2 Tool #2: Consider Rehabilitating and Reusing Existing Buildings and Space

Place Goals: Celebrate the Character of the Place

Tool Type: Architecture, Activities & Uses

Tool #1: Context Sensitive Architecture explains the importance of upholding the historic character of Kapahulu Avenue. In addition to designing context-sensitive solutions for improvements and new construction in the area, another way to preserve the historic character of Kapahulu Avenue is to consider rehabilitating and reusing existing buildings and spaces. New establishments are moving into the area and in some cases, buildings are demolished and rebuilt again. Sometimes the new construction of the buildings results in non context sensitive architecture that looks out of place along the street. To avoid this stand out architecture, there should be a consideration of rehabilitating existing buildings and spaces.

Rehabilitating and reusing an existing building or space has its advantages. Doing this will help to preserve the historic buildings of the area which is also a request of community members. Another positive about this design approach for new developments is that it can lower the cost of opening a new establishment. With this design approach, designers need to consider the potential of the existing building and space and explore the options that create better placemaking opportunities.

10.1.3 Tool #3: Capitalize on Local Assets

Place Goals: Celebrate the Character of the Place

Tool Type: Activities & Uses

Part of the placemaking process is to capitalize on local assets of the community. A place can be improved based off of what exists in the local community. This gives designers and planners a good starting point in the initial design phases. Utilizing this tool requires designers and planners to understand the place they are designing for and one option for learning about the local assets of a place is to go to the community and stakeholders for their input. Doing this will help people understand what assets and elements of a place works in terms of attracting people to the place.

For Kapahulu Avenue one can argue that a local asset of this place is its collection of various food and services establishments, but the thing that usually brings people to the area are the many food establishments. Kapahulu Avenue is home to some famous food establishments known to people of Hawaii: Rainbow Drive-In, Leonard's Bakery, Haili's Hawaiian Food, and Waiola Shave Ice are some examples. When creating a third place on Kapahulu Avenue, consider the assets of the Kapahulu Community and use them to determine an ideal location for a third place.

10.1.4 Tool #4: Support Local Businesses

Place Goals: Celebrate the Character of the Place

Tool Type: Activities & Uses

This design tool recommends supporting local businesses of the area. When a community supports its local businesses it helps to create a better sense of community and helps to support the area in which they live. Supporting local businesses also helps to develop community pride. A sense of community pride is important in terms of maintaining the place. By supporting local businesses, some business may contribute or cover the costs of a place's maintenance.

10.1.5 Tool #5: Maintain the Diamond Head View

Place Goals: Celebrate the Character of the Place

Tool Type: Activities & Uses

Kapahulu Avenue lies in a neighborhood near the Diamond Head district. The Diamond Head Crater attracts many tourists. It is a place of recreation (for its hike) and a destination for tourists. It is also often photographed from various vantage points from its surrounding areas. While Diamond Head is not actually visible from the street in some places of Kapahulu, it is however, visible from roof tops, multi-story buildings, and apartment complexes. The Kapahulu Community Plan suggests preserving and improving views of Diamond Head since it is a part of Kapahulu's identity. This tool supports this idea to preserve and improve these views of Diamond Head. Solutions for this are to follow the building heights suggested for each zone and to build low rise buildings that do not obstruct the Diamond Head view from a distance.

10.2 GOAL #2: Active & Engaging Place



Figure 60. Goal #2: Active & Engaging Place

Source: Stephanie Ing, University of Hawaii at Manoa

A place occurs where people interact with each other and their environment. A third place is an informal public place where people gather and interact with each other. The tools described in this section promote creating a vibrant and active place where people can engage with the environment along the street and with each other.

<div> <div>GOAL #2</div> <div>ACTIVE & ENGAGING PLACE</div> </div>		
DESIGN TOOLS	TOOL TYPE	THIRD PLACE CATEGORY
<div>AGF</div> <div>TOOL #6 : ACTIVATE THE GROUND FLOOR</div>	ACTIVITIES & USES	PERMEABILITY
<div></div> <div>TOOL #7 : PERSONALIZE THE STOREFRONT</div>	FURNISHINGS	PERSONALIZATION
<div></div> <div>TOOL #8 : PUBLIC ART</div>	FURNISHINGS	PERSONALIZATION
<div></div> <div>TOOL #9 : TEMPORARY INSTALLATIONS</div>	FURNISHINGS	PERSONALIZATION
<div></div> <div>TOOL #10 : HOST EVENTS</div>	ACTIVITIES & USES	
<div></div> <div>TOOL #11 : TRIANGULATION</div>	ACTIVITIES & USES	
<div></div> <div>TOOL #12 : COMMUNITY ACTIVITIES</div>	ACTIVITIES & USES	

Table 2. Goal #2 Design Tools
Source: Stephanie Ing, University of Hawaii at Manoa

10.2.1 Tool #6: Activate the Ground Floor

Place Goals: Active & Engaging Place

Tool Type: Activities & Uses

Third Place Category: Permeability

This tool suggests activating the ground floor meaning to create activity at the ground floor level bordering the street. Active ground floor uses help to create enhanced experiences for pedestrians and motorists at the street level. These activities create engaging places that provide interaction between the interior and exterior of buildings bordering the street. Ground floor uses should be able to overflow into the sidewalk space and in some cases, the street space, in order to create an image of a shared space. Active ground floors also help to create sidewalk activity and slows vehicular traffic.

One way this tool helps to create third place is by allowing for the transparency of a store's facade. Permeability is one physical characteristic of a third place and to create permeability in a storefront's facade, large openings or windows should be considered in the storefront's design. Allowing people to see interior activities from the exterior of the store helps them to understand what activities are taking place and maybe even draw them into the store. The large openings or windows also allow storeowners to display goods in the window. This also helps to draw people into the store. Activating the ground floor with this strategy of permeability as well as having activities overflowing into the sidewalk helps to create an active third place opportunity drawing people to the area.

10.2.2 Tool #7: Personalize the Storefront

Place Goals: Active & Engaging Place

Tool Type: Furnishings

Third Place Category: Personalization

Personalizing the storefront is a tool that helps to draw people's attention to storefronts and buildings. Personalizing a storefront can add to the character of the place. With this tool, storeowners can express to their customers that this is their store and they take pride in what they are selling. Personalizing the storefront also allows the business owners to apply their aesthetic to the space. Personalization can be done by applying materials on the storefront's facade (keeping in mind that it should not clash with the existing materials of the area), addition of planters or living walls (see design tool #23), adding ornamental elements to the storefront, or even special paint jobs.

Personalization is a physical characteristic of a third place. Therefore, personalizing the storefront helps in creating a third place. Third places are places that draw people to them so they can gather and socialize. Personalizing the storefronts make them interesting, unique from other stores, and can even help stores to standout in their surroundings. These storefronts give reasons for people to slow down , stop, and look at these interesting places. It may also facilitate conversations and social interactions among people. In this sense, personalization of storefronts helps to create a third place.

10.2.3 Tool #8: Public Art

Place Goals: Active & Engaging Place

Tool Type: Furnishings

Third Place Category: Personalization

This tool recommends adding public art to the area. Some instances of public art on Kapahulu Avenue exist in forms of murals and graffiti art. Adding public art creates interest in the area and can even enhance a pedestrian's experience walking down the street. Allowing public art to be displayed creates more foot traffic and attracts all types of users to a place: residents, tourists and visitors, people from the art community just to name a few. Public art brings people together and allows them to interact with each other which is what third place is all about: the gathering of people.

Public art does not have to be just for display. This type of art can also be used to tell the story of a place's history and culture. Types of public art that can be implemented along Kapahulu Avenue are murals, paintings, sculptures, and even interactive and functional art. The public art can be installed on private property with the owner's permission, or it can be installed on public property. It can also be permanent or temporary. While public art installations are encouraged, there must be some consideration as to where the art will be placed to avoid being hidden from pedestrians' and motorists' views.

10.2.4 Tool #9: Temporary Installations

Place Goals: Active & Engaging Place

Tool Type: Furnishings

Third Place Category: Personalization

This tool suggests implementing temporary installations to facilitate third place on Kapahulu Avenue. Temporary installations are projects or design strategies that can be temporarily applied to the street. They create opportunities for designers and planners to experiment with new strategies they would like to apply to the street or place. Temporary installations help the installers to study how the installation is improving or not improving a place, how people interact and react to its placement, and how effective it is.

Placing temporary installations along the street capture people's interest and create opportunities for people to gather and converse about the installation. They help a place become more active and engaging. Depending on the type of installation and its purpose, they can attract more people to a place to help test them.

10.2.5 Tool #10: Host Events

Place Goals: Active & Engaging Place

Tool Type: Activities & Uses

This tool suggests hosting events in spaces along Kapahulu Avenue. Events bring people together and therefore bring pedestrian activity to a place. They also give the community an opportunity to explore potential uses of spaces on along the street, which could lead to the development of a space for a new use. Hosting events can bring communities together and can help in sparking new ideas for different uses and improvements for the street. Allowing for this type of gathering adds to the identity of the place.

Events can range from a small scale to a large scale. They can be hosted annually, monthly, or weekly. Events such as food truck tastings, a restaurant crawl, festivals, parades, farmer's markets, sidewalk sales, or even educational events are just some suggestions that can be applied to Kapahulu Avenue.

10.2.6 Tool #11: Triangulation

Place Goals: Active & Engaging Place

Tool Type: Activities & Uses

This tool presents using the triangulation strategy to facilitate third place. This tool will be explained using the following excerpt from chapter two:

PPS defines triangulation using Whyte's words from his book, *The Social Life of Small Urban Spaces*: "Triangulation is the process by which some external stimulus provides a linkage between people and prompts strangers to talk to other strangers as if they knew each other."³⁴³ Triangulation is activated when various elements are arranged in relation to each other. The elements and their uses are organized in a way that organically guides the user from one element to the next. By implementing triangulation, people will be drawn to this place and engage in more activities.³⁴⁴

Triangulating uses and amenities encourages interaction with the surrounding environment and social interaction thus creating an active place. When triangulating places along the street, a network of connecting places is created where one place leads to the next and so on. This helps with the flow of foot traffic along the street and creates opportunities for other places on the street to be explored.

³⁴³ Ibid.

³⁴⁴ Ibid.

10.2.7 Tool #12: Community Activities

Place Goals: Active & Engaging Place

Tool Type: Activities & Uses

This tool suggests creating and hosting community activities in the area. Providing community activities helps to strengthen people's sense of community. They encourage people to leave their homes to engage with others in the community, as well as help foster their sense of community. Community activities can also help to further the identity of the place. Some community activities that can take place on Kapahulu Avenue are volunteer work, beautification days, creating community art, recreational activities, community gardens, and even workshops or classes that can be held in a space on Kapahulu Avenue. Hosting recurring community activities on Kapahulu Avenue gives people a reason to return if they enjoyed their experience.

10.3 GOAL #3: Shared & Flexible Place



Figure 61. Goal #3: Shared & Flexible Place

Source: Stephanie Ing

A successful place is shared and caters to all its users such as pedestrians, cyclists, drivers, locals, business owners, and tourists. The tools presented in this section promote enhancing a place's flexibility and ability to be accessible to all. The tools aim to enhance a place's physical environment to create opportunities for people to connect with each other and the place.



GOAL #3

SHARED & FLEXIBLE PLACE

DESIGN TOOLS

TOOL TYPE

THIRD PLACE CATEGORY



TOOL #13 : CREATE PLAZAS

PEDESTRIAN-ORIENTED



TOOL #14 : CURB EXTENSIONS

PEDESTRIAN-ORIENTED



TOOL #15 : PARKLETS

PEDESTRIAN-ORIENTED

PERSONALIZATION



TOOL #16 : PAVING

PEDESTRIAN-ORIENTED



TOOL #17 : TEMPORARY STREET CLOSURES FOR EVENTS

ACTIVITIES & USES



TOOL #18 : BICYCLE PARKING

FURNISHINGS



TOOL #19 : CREATE SPACES FOR FLEXIBILITY

PEDESTRIAN-ORIENTED

SEATING

Table 3. Goal #3 Design Tools

Source: Stephanie Ing, University of Hawaii at Manoa

10.3.1 Tool #13: Create Plazas

Place Goals: Shared & Flexible Place

Tool Type: Pedestrian-Oriented

This tool suggests creating a plaza when large open spaces are present along the street. Historically, plazas were a place where people gathered and socialized with one another. They were also one of the first examples of a third place. When redesigning a street, more space may be created or reclaimed to create a plaza or mini plaza. Underutilized street space can be reconfigured into a plaza as well. The plazas would serve as a large open gathering space for people use.

Creating a plaza at an intersection will help to make the intersection safer by creating more waiting space for pedestrians as well as shortening crossing distances by extending plaza space out into the street. Plazas also help to slow down vehicles and if planned right, can help mitigate complicated and dangerous intersections. Creating a plaza along the street will help to energize its surrounding places and the street. This increases foot traffic, which could result in more business and support surrounding businesses. Amenities that could be used in the design of the plaza are design tools that support Goal #4. Other design tools that can be used in the creation of a plaza are public art, temporary installations, paving, and bicycle parking.

10.3.2 Tool #14: Curb Extensions

Place Goals: Shared & Flexible Place

Tool Type: Pedestrian-Oriented

Curb extensions extend part of the sidewalk into the street. This street design element is used to visually and physically narrow the street to slow down approaching vehicles. Curb extensions also shorten the crossing distance at crosswalks reducing the time a pedestrian is exposed to vehicles while crossing the street. This is a pedestrian-oriented safety measure.

Curb extensions help improve the safety of pedestrians by narrowing the street, which means that they also widen the sidewalk space. More space on the sidewalk gives more space for pedestrians and amenities that can be installed to enhance the pedestrian environment. Amenities that can be installed are street furniture, benches, street trees, landscaping, plantings, and even rain gardens.

10.3.3 Tool #15: Parklets

Place Goals: Shared & Flexible Place

Tool Type: Pedestrian-Oriented, Furnishings

Third Place Category: Personalization, Seating

According to NACTO's Urban Street Design Guide, "[p]arklets are public seating platforms that convert curbside parking spaces into vibrant community spaces...parklets are the product of a partnership between the city and local businesses, residents or neighborhood associations."³⁴⁵ They typically provide more seating, planting, and on some occasions, shading opportunities. The width of a parklet is usually 6 feet or the width of a parking lane and can be the length of one or more parallel parking spaces or three to four angled parking spaces.

Parklets provide pedestrian spaces that extend out on the street. They provide spaces for people to gather on the street and additional seating space. All parklet designs are different due to the context of the area. While parklets are public installations meant for the use of the community, they sometimes increase revenue for the adjacent businesses by attracting more people to this area. Since parklets are open to the public, are for all users to enjoy, and attract people, parklets can be considered facilitators of third place and even a third place themselves. This design toolkit gives a brief introduction to the parklets program. For more information about how to design, construct, and create a parklet, refer to the San Francisco Parklet Manual or NACTO's Urban Street Design Guide. Links to the websites of these programs can be found below:

- <http://nacto.org/publication/urban-street-design-guide/>
- <http://pavementtoparks.org/>
- <http://pavementtoparks.org/parklets/#parklet-manual>

³⁴⁵ National Association of City Transportation Officials, *Urban Street Design Guide* (Washington: Island Press, 2013), 77.

10.3.4 Tool #16: Paving

Place Goals: Shared & Flexible Place

Tool Type: Pedestrian-Oriented

Installing different types of paving along the street is a pedestrian-oriented tool that can enhance the aesthetics of the place. Utilizing different types of paving helps inform pedestrians, bicyclists, and motorists of different types of spaces and their uses. Paving with other materials helps to delineate one space from the other. For example, paving can be applied to delineate shared zones for all users of the street (pedestrians, bicyclists, and motorists) or pedestrian zones. Another example of using different paving materials to distinguish different spaces are the materials used for streets and sidewalks. Streets use asphalt and sidewalks use concrete as materials for their paving. Because of this commonality, people usually associate asphalt paving with cars and the street, and concrete paving is associated with the sidewalk and pedestrians. Other materials for paving range from textured/colored concrete, brick, stone, and concrete pavers.

The differences in paving also helps direct circulation and navigation in addition to delineating spaces. In Shared Spaces, different types of paving is used to inform all users of the street that this travel way is shared among pedestrians, bicycles and motorists. It implies to motorists that they must take caution and travel at low speeds as pedestrians and cyclists are free to wander in the space.

10.3.5 Tool #17: Temporary Street Closures for Events

Place Goals: Shared & Flexible Place

Tool Type: Activities & Uses

Temporary street closures for events helps to transform a street from a space for vehicles into a place for the people. This is a strategy that restricts the street for the use of pedestrians for a few hours and allows more people to gather on the street to transform it into a vibrant place. For this strategy to be employed, event planners should work with city offices and the community to determine the time the street will be closed and how it will affect noise and traffic in the area.

With temporary street closures, the community gets the opportunity to explore different uses for spaces on the street. Amenities that allow people to linger in a place can be provided on the street during these street closures. Examples of these amenities are tables, chairs, benches, planters, tents and stages. Temporary street closures for events facilitates turning a street into a third place by allowing people to gather and interact with each other on the actual street. Types of events that can occur during these closures are movie screenings, concerts, block parties, markets, craft fairs, parades, and food events.

10.3.6 Tool #18: Bicycle Parking

Place Goals: Shared & Flexible Place

Tool Type: Furnishings

Providing bicycle parking is key in improving the Kapahulu bicycle network. Bicycle racks or corrals should be provided where there are bicycle lanes, paths, and sharrows located near buildings and storefronts. Bicycle racks can park one to two bicycles. A bicycle corral can park up to twelve bicycles. This parking gives people a space to park their bicycle while they explore an area by foot or go shopping down the street. Providing bicycle parking increases the accessibility of the place opening it up to more users. Bicycle parking should be spaced evenly along Kapahulu Avenue.

10.3.7 Tool #19: Create Spaces for Flexibility

Place Goals: Shared & Flexible Place

Tool Type: Pedestrian-Oriented

Third Place Category: Seating

Creating spaces for flexibility means to create a space that can have different uses. Allowing for flexibility in a space can increase the comfort of a space. This space can be shared among users of the street. Strategies for this is to create open spaces and allow for some moveable amenities to be placed there such as non-fixed seating and tables. A flexible space has the potential to bring different people and different events to be hosted in the space.

10.4 GOAL #4: Comfortable & Safe Place



Figure 62. Goal #4: Comfortable & Safe Place

Source: Stephanie Ing, University of Hawaii at Manoa

The comfort and safety of a place play a role in how many times people frequent the place. A comfortable and safe environment for people allows opportunities for more activities to occur in the place. The tools presented in this section suggest improving Kapahulu Avenue's comfort and safety to reduce traffic accidents, improve maintenance of the place, and help prevent illegal activity.






<div> <div>GOAL #4</div> <div>COMFORTABLE & SAFE PLACE</div> </div>			
DESIGN TOOLS	TOOL TYPE	THIRD PLACE CATEGORY	
<div>  <div>TOOL #20 : LIGHTING</div> </div>	LIGHTING	PERMEABILITY	
<div>  <div>TOOL #21 : SHADING ELEMENTS</div> </div>	FURNISHINGS	SHELTER	
<div>  <div>TOOL #22 : SEATING</div> </div>	FURNISHINGS	SEATING	
<div>  <div>TOOL #23 : GREENERY</div> </div>	LANDSCAPING	SHELTER	
<div>  <div>TOOL #24 : COMMUNITY INVOLVEMENT IN MAINTAINING THE AREA</div> </div>	ACTIVITIES & USES		

Table 4. Goal #4 Design Tools
Source: Stephanie Ing, University of Hawaii at Manoa

10.4.1 Tool #20: Lighting

Place Goals: Comfortable & Safe Place

Tool Type: Furnishings

Third Place Category: Permeability

This tool suggests installing lighting in darker areas of the street to create safe and comfortable places after dark. Providing people with a better sense of comfort and safety at night results in them being more willing to venture out of their homes and explore a place at night. Three types of lighting can be considered for Kapahulu Avenue: street-scale lighting, pedestrian-scale lighting, and ambient lighting.

Street-scale lighting includes overhead lighting to improve the visibility and safety of all users of the street including the pedestrians, bicyclists, and motorists. Light poles is an example of this type of lighting.

Pedestrian-scale lighting provides lighting closer to the ground and is used to enhance the visual clarity of pedestrians at night. Using this type of light to brighten paths (such as the Lei of Parks Shared Use Path), darkened alleys, or sidewalks, increases the walkability and safety of the pedestrians at night.

Ambient lighting can be used on storefronts or outdoor seating areas. While this lighting is not strong enough to light a large space, it does enhance the atmosphere of a place to make it more appealing, warm, inviting and comfortable for people. Examples of ambient lighting are string lights, candle lighting, lanterns, or tree lighting.

10.4.2 Tool #21: Shading Elements

Place Goals: Comfortable & Safe Place

Tool Type: Furnishings

Third Place Category: Shelter

Since Kapahulu is located in Hawaii, bright sunlight, heat from the sun, and humidity can sometimes be overwhelming and uncomfortable. Shading elements such as building overhangs, awnings, canopies and street trees provide protection and comfort from these elements and the rain. Providing comfortable microclimate conditions, such as the right temperature, amount of sunlight, and amount of shade, helps to support outdoor activities.³⁴⁶

When designing a new building or rehabilitating one, consider adding longer overhangs or awnings as a part of the design. This will provide shading and shelter along the street. Where architectural elements cannot be installed, use street trees to provide shading and shelter.

³⁴⁶ Vikas Mehta and Jennifer K. Bosson, "Third Places and the Social Life of Streets," *Environment and Behavior* 42 (2010): 779, accessed March 15, 2015, doi:10.1177/0013916509344677, 782.

10.4.3 Tool #22: Seating

Place Goals: Comfortable & Safe Place

Tool Type: Furnishings

Third Place Category: Seating

Seating and its flexibility in a place is central to the sociability of the street. An excerpt taken from chapter three explains the importance of seating in a place:

Seating, especially when the elements are moveable, helps to keep people in a place longer. Movable seating gives people the choice and flexibility to adjust to a more comfortable setting according to the weather conditions—heat, sun, cold, wind, or rain.

In addition to allowing people to stay in a place longer, providing outdoor seating for the consumption of goods outside a store allows a business's activity to extend to the exterior, providing a stronger connection to the activity along the sidewalk and street. Eating and drinking are often associated with socialization; therefore, the combination of food, drink, and outdoor seating helps to create conditions that may extend visits to a place. This combination also supports the social life on the street; outdoor seating provides visibility of people engaged at an establishment, which in turn draws others to the establishment.³⁴⁷

Since seating allows people to have longer visits to a place and helps to attract other people to these places, seating is considered a tool that facilitates third place. On Kapahulu Avenue, seating should be provided where there is enough side walk space to host this amenity. Outdoor seating can be located outside of storefronts, along pedestrian paths (such as the Lei of Parks Shared Use Path), in open spaces, and parks. Preferable types of seating would be moveable ones such as chairs. Other types that can be used are park benches, street furniture, or custom seating around planters. Seating can also be provided with parklets.

³⁴⁷ Ibid.

10.4.4 Tool #23: Greenery

Place Goals: Comfortable & Safe Place

Tool Type: Landscaping

Third Place Category: Shelter

Adding greenery to a place is a tool that helps to make a place comfortable, aesthetically pleasing, and inviting. Studies have shown that nature can improve people's physical and psychological health and well-being. Kapahulu Avenue has instances of greenery scattered along the street, where some sections of the street have a concentrated area of greenery while others do not. Greenery can be added to the places along the street that lack aesthetic greenery.

Different types of greenery can be applied to Kapahulu Avenue. Sidewalk gardens is a type of greenery that provides an attractive green space along the street. It may also serve as a tool in storm water management. These gardens can contain landscaping elements, grass, and flora.

Above ground planters hold a variety of plants from small street trees to shrubs to flowering plants. Free standing planter boxes can be installed along the street as a buffer between the pedestrians and traffic. They can also be equipped with benches for seating. These planters can also be used to personalize a storefront. Other types of planters are hanging planters which would be used on buildings.

Living walls are vertical gardens that are structurally installed on walls. While this type of greenery tends to attract people to it and can be aesthetically pleasing, living walls covering a large area of the exterior walls on Kapahulu avenue is not recommended. This is due to keeping the image of the Kapahulu Avenue within its historic context.

Street trees help to make a walking along the street a more pleasant experience. They provide shade, shelter, and cooling. Street trees promote a safer and pleasant pedestrian experience.

10.4.5 Tool #24: Community Involvement with Maintenance

Place Goals: Comfortable & Safe Place

Tool Type: Activities & Uses

A clean and safe place helps to create a good image of the place. A well maintained place promotes a safe and healthy environment which encourages people to return to a place. Maintaining a clean and safe place can also help to deter crime and other illegal activities. People responsible for maintaining the street or a place are the city and business owners. While these parties are usually the people who maintain the place, the community should also help in maintaining these places. A stronger sense of community and pride in the place where people live may result when a community becomes active in the maintenance of their place.

CHAPTER 11 | APPLICATION OF THE DESIGN TOOLKIT

To demonstrate how the Kapahulu Design Toolkit can be applied to this street, a site was selected using information from the site analysis. Although one site was selected, a total of three sites were examined to apply the toolkit to these sites (see Figure 63):

- Site #1: Ala Wai Golf Course Section of Kapahulu Avenue
- Site #2: Date Street Intersection
- Site #3: Winam Avenue and Palani Avenue Intersection

These sites were picked based on their potential to be developed as a third place on Kapahulu Avenue. These sites were also picked for their potential to apply multiple tools of the design toolkit. The two potential sites may be developed in the future using the Kapahulu Design Toolkit.

Site #3: Winam Avenue and Palani Avenue Intersection was determined to have the most potential to apply multiple tools in the design toolkit due. Factors that aided this selection are:

- four out of the five corners are activated at the intersection
- a large vacant lot that has the potential to become a plaza
- it is an intersection that can become a place where people gather
- the building uses already bring people to the place
- parking is available in adjacent lots
- ground floor activity is already established on the east side of the street
- there is potential for a parklet to be installed

Using the Kapahulu Design toolkit, site #3 was designed. The following figures present the three sites and the application of the toolkit at the third site.



Figure 63. Modified Google Earth Image, Kapahulu Avenue Site Selections Map, Source: Stephanie Ing, University of Hawaii at Manoa



Figure 64. Google Maps, Street Views of Site #1,
Source: Google, Google Maps, <https://www.google.com/maps/place/Kapahulu+Ave,+Honolulu,+HI/>, (Accessed December 15, 2015).

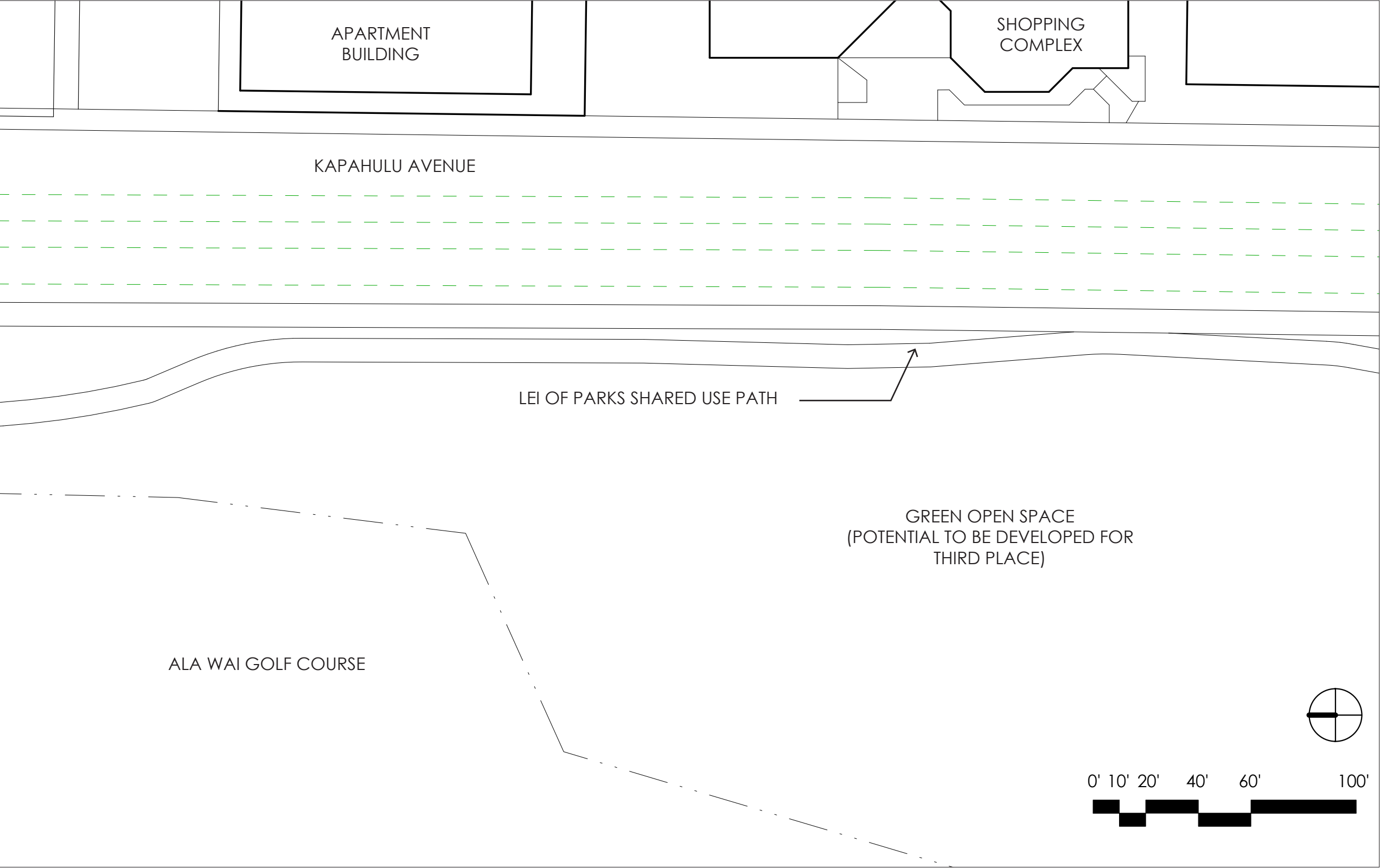


Figure 65. Potential Site #1: Ala Wai Golf Course Section of Kapahulu Avenue Existing Plan
Source: Stephanie Ing, University of Hawaii at Manoa



Figure 66. Google Maps, Street Views of Site #2,
Source: Google, Google Maps, <https://www.google.com/maps/place/Kapahu-lu+Ave,+Honolulu,+HI/>, (Accessed December 15, 2015).

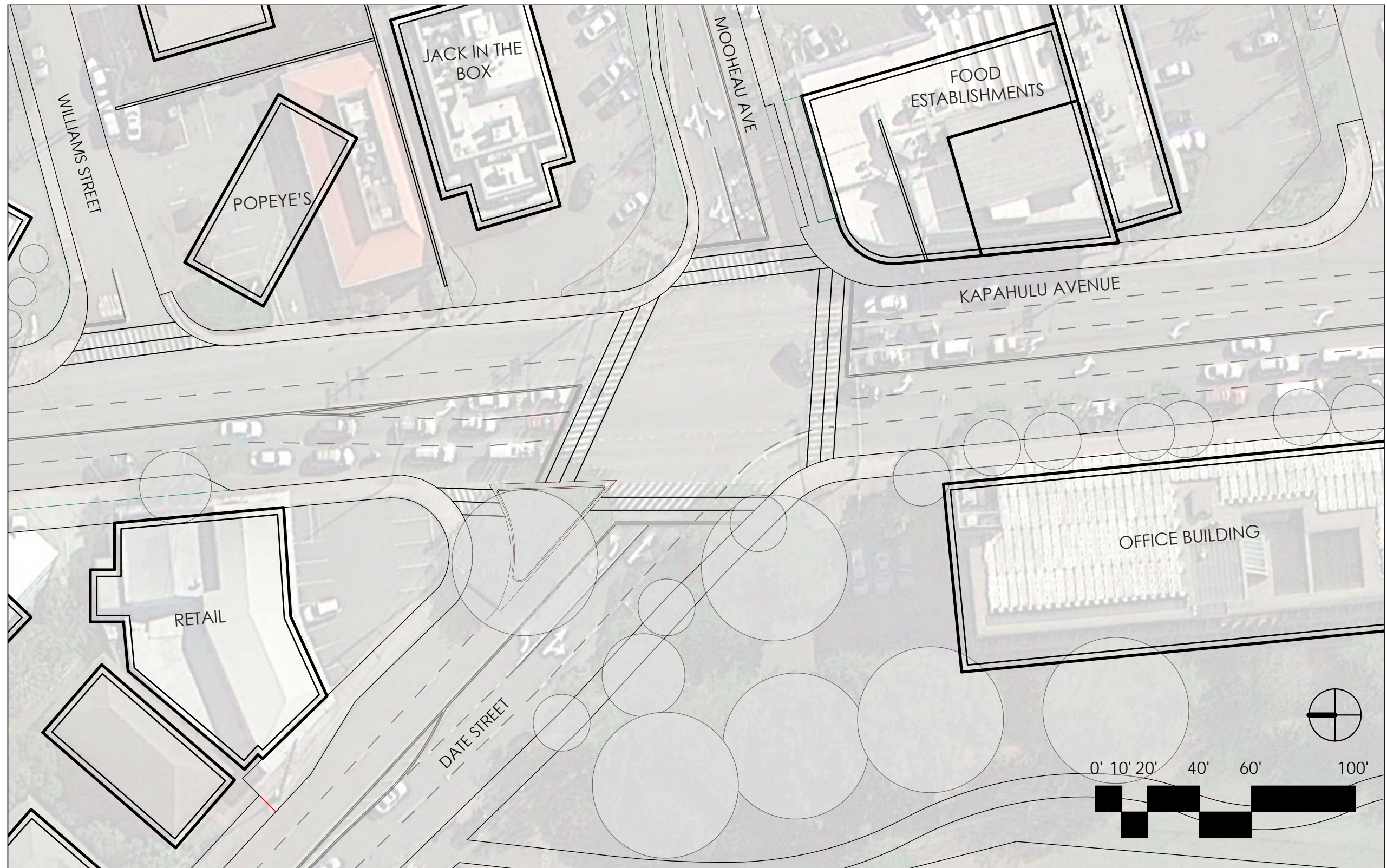


Figure 67. Potential Site #2: Date Street Intersection Existing Plan
 Source: Stephanie Ing, University of Hawaii at Manoa



Figure 68. Google Maps, Street Views of Site #3,
Source: Google, Google Maps, <https://www.google.com/maps/place/Kapahulu+Ave,+Honolulu,+HI/>, (Accessed December 15, 2015).

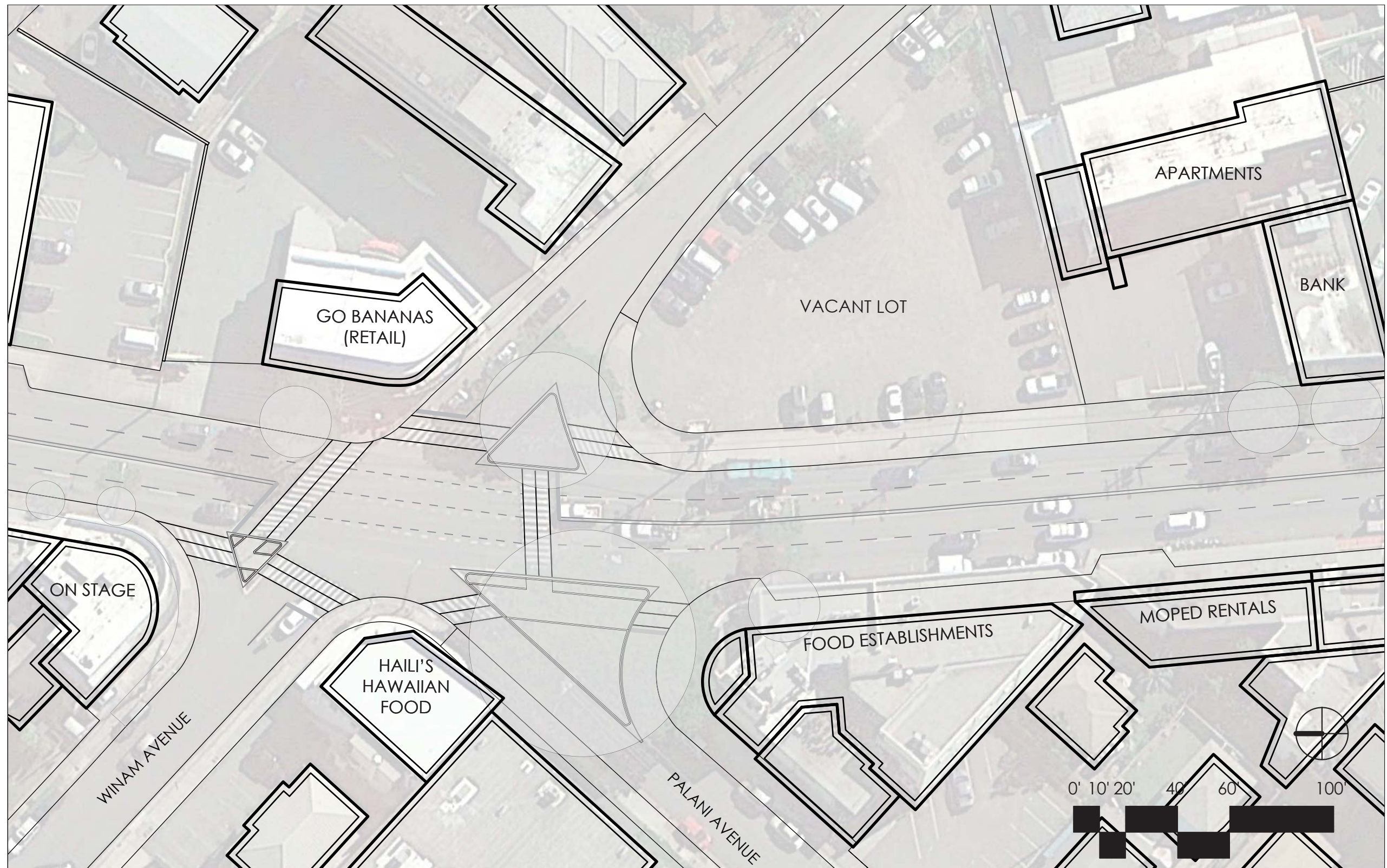
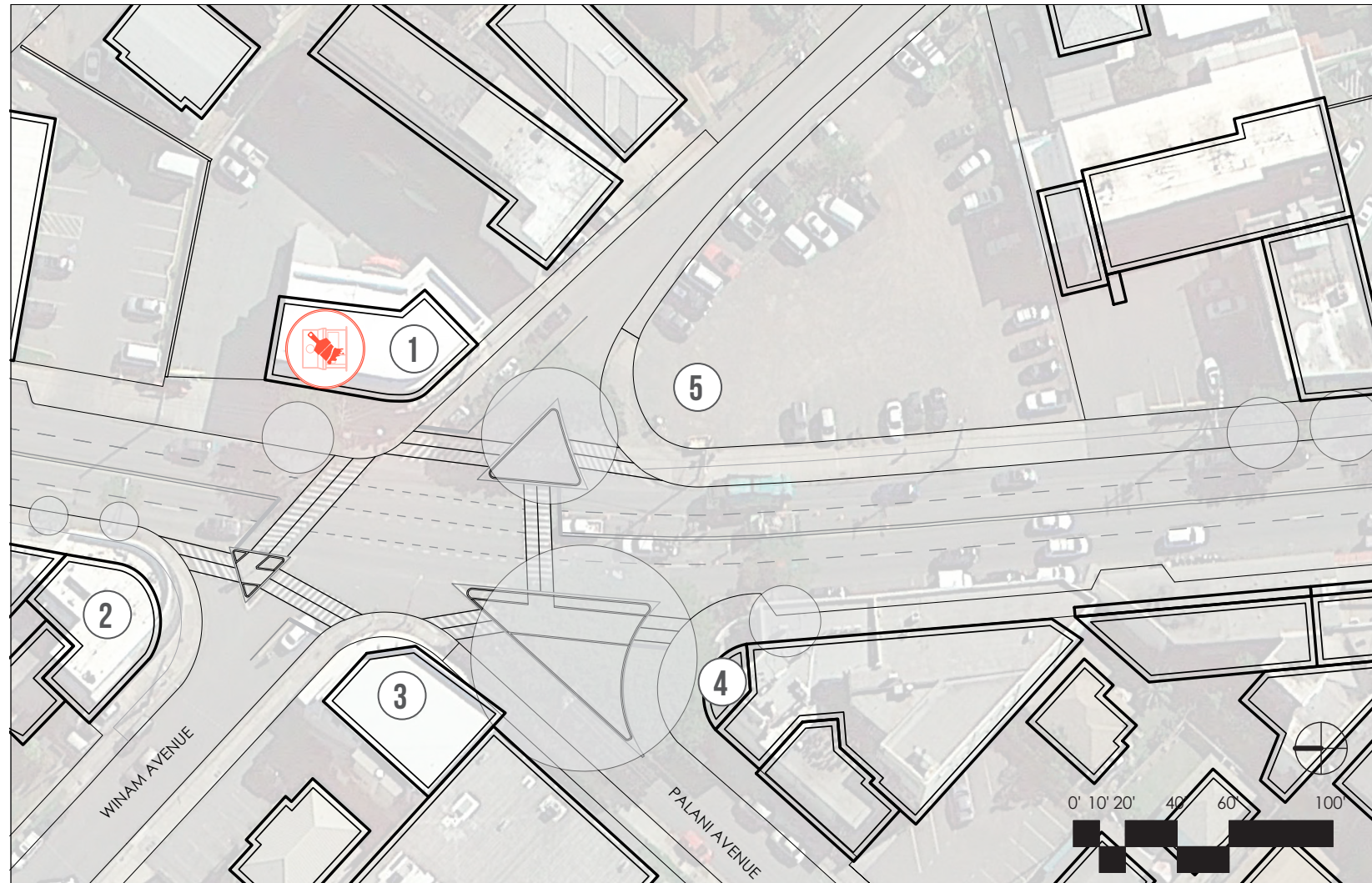


Figure 69. Site #3: Winam Avenue and Palani Avenue Intersection Existing Plan
 Source: Stephanie Ing, University of Hawaii at Manoa



Go Bananas



On Stage



Haili's Hawaiian Food



Pizza Hut



Vacant Lot

APPLIED DESIGN TOOLS



Tool #3: Capitalize on Local Assets

Stores and food establishments in this area are already established. People come to these places to eat and socialize. This can be used when creating the third place.



Tool #4: Support Local Businesses

Businesses in this section of Kapahulu Avenue are mostly local.



Tool #7: Personalize the Store Front

Personalization of the storefront exists at Go Bananas. They have a mural on an exterior wall and have a vibrant paint job. Other storefronts at the corners of this section of Kapahulu Avenue have the opportunity to be more creative.

Figure 70. Site #3: Winam Avenue and Palani Avenue Intersection Exisiting Edge Analysis
Source: Stephanie Ing, University of Hawaii at Manoa

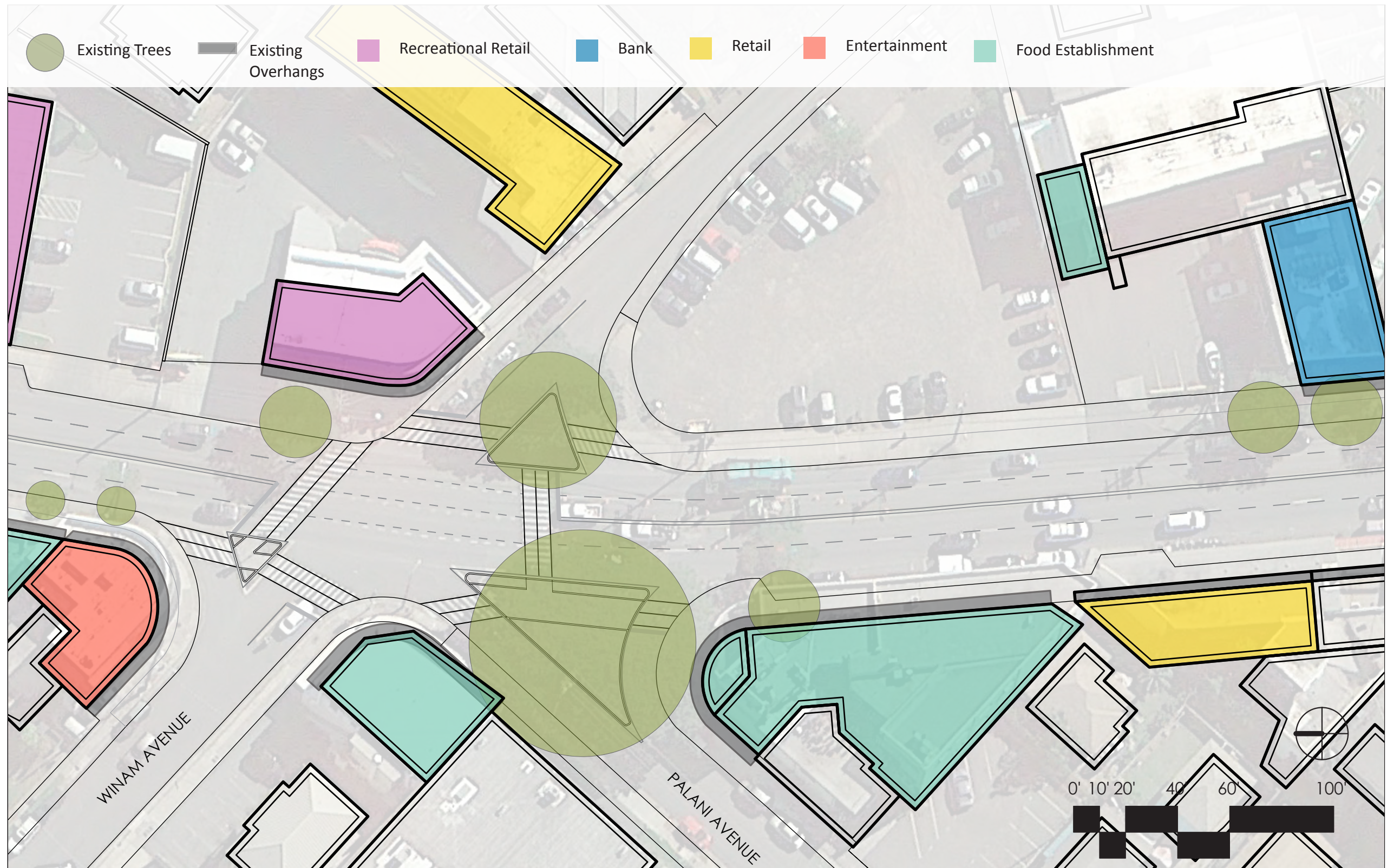


Figure 71. Site #3: Winam Avenue and Palani Avenue Intersection Existing Site Conditions
Source: Stephanie Ing, University of Hawaii at Manoa

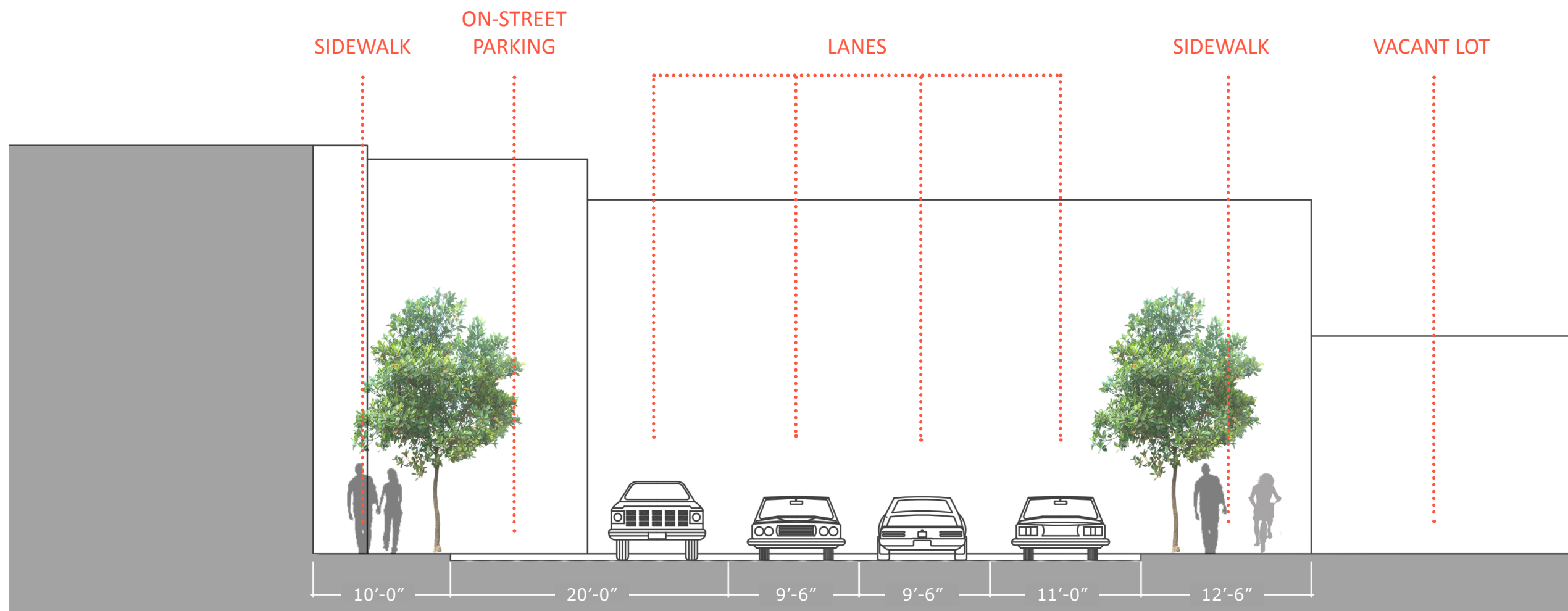


Figure 72. Site #3: Winam Avenue and Palani Avenue Intersection Existing Section
 Source: Stephanie Ing, University of Hawaii at Manoa

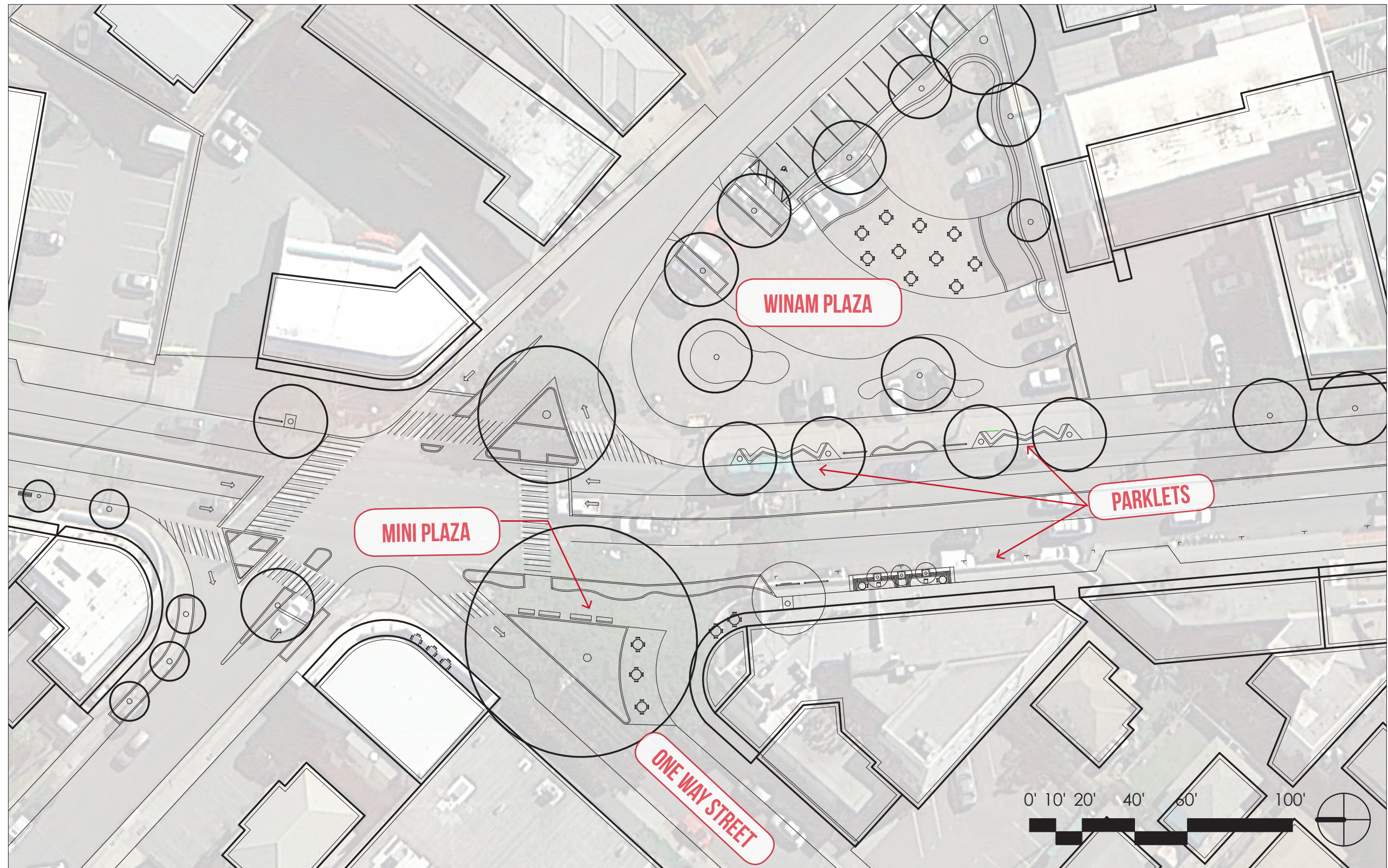
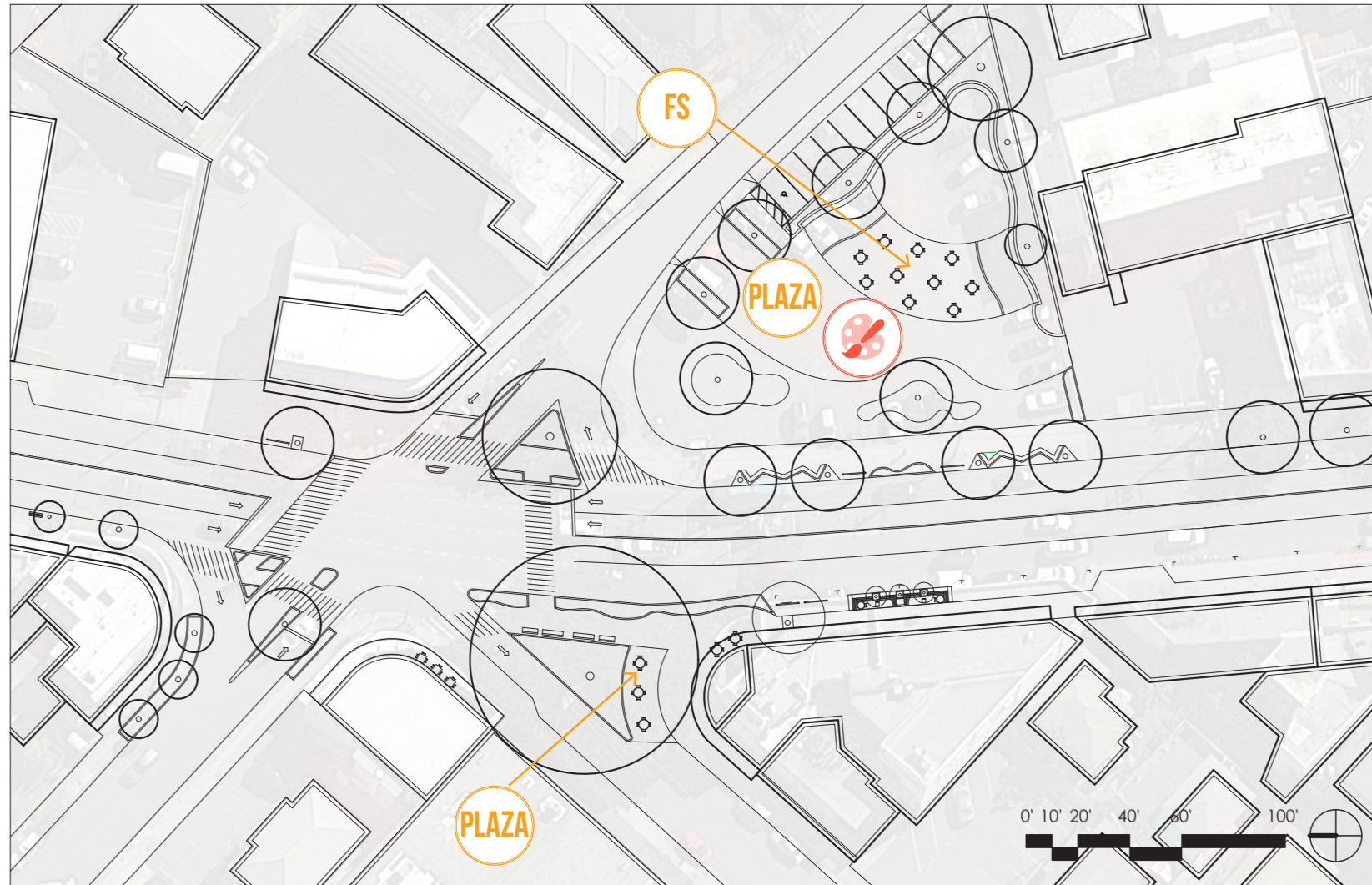


Figure 73. Site #3: Winam Avenue and Palani Avenue Intersection New Plan
 Source: Stephanie Ing, University of Hawaii at Manoa



Tool #6: Activate the Ground Floor

Active Ground Floors were already provided at this section of Kapahulu Avenue. The ground floor activities now have the opportunity to overflow into the wider sidewalk.



Tool #8: Public Art

Public art can be installed in the plaza



Tool #13: Create Plazas

Plazas were created in the large spaces provided at the intersection.



Tool #19: Create SPaces For Flexibility

Flexible space is provided in the plaza. Moveable ables and chairs are installed here to all people to freely move around. The space in the plaza can be used for events.

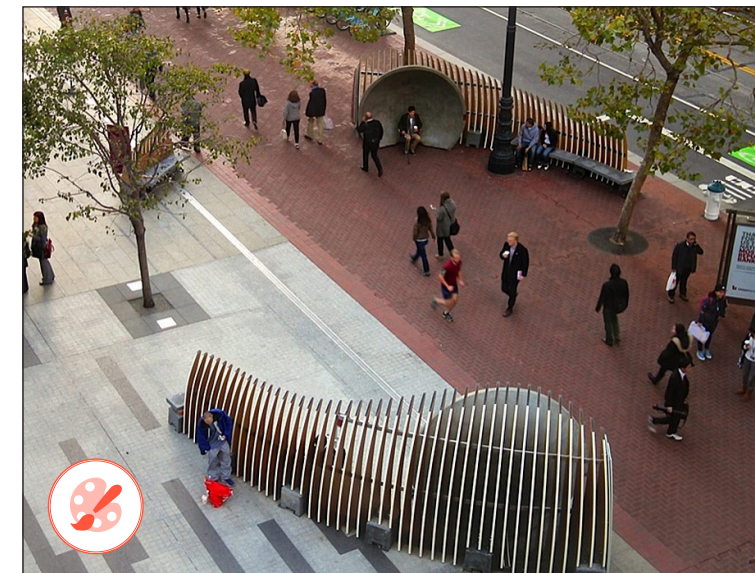
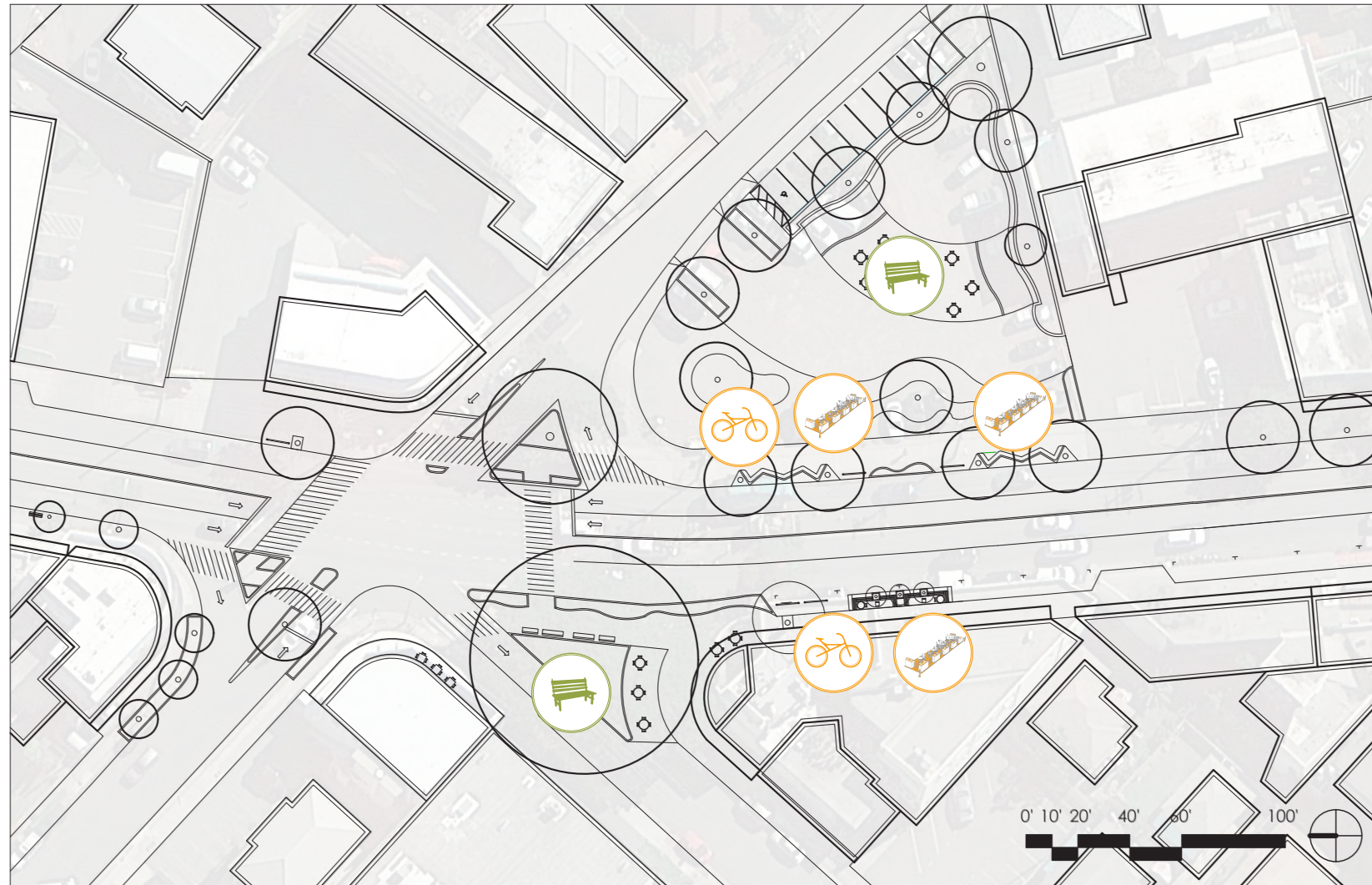


Figure 74. Site #3: Winam Avenue and Palani Avenue Intersection Design Toolkit Application (1)
Source: Stephanie Ing, University of Hawaii at Manoa



Tool #15: Parklets

Parklets are installed across from each other. They add interesting space on the sidewalks. They also provide places for people to sit. the parklet across



Tool #18: Bicycle Facilities

Install bicycle corrals by parklets for bicycle parking.



Tool#21: Shading

Shading is provided over the plaza space with a structure. Other forms of shading in are street trees.



Tool #22: Seating

Provide seating in open space and wider sidewalks. Seating here is in the form of movable chairs in the plazas and at Pizza Hut, and the benches by the at the

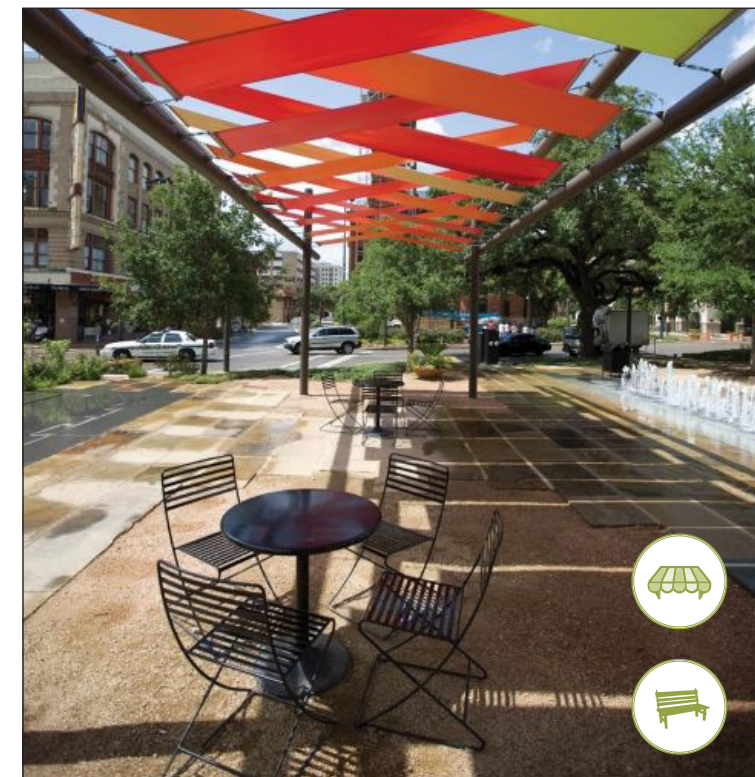
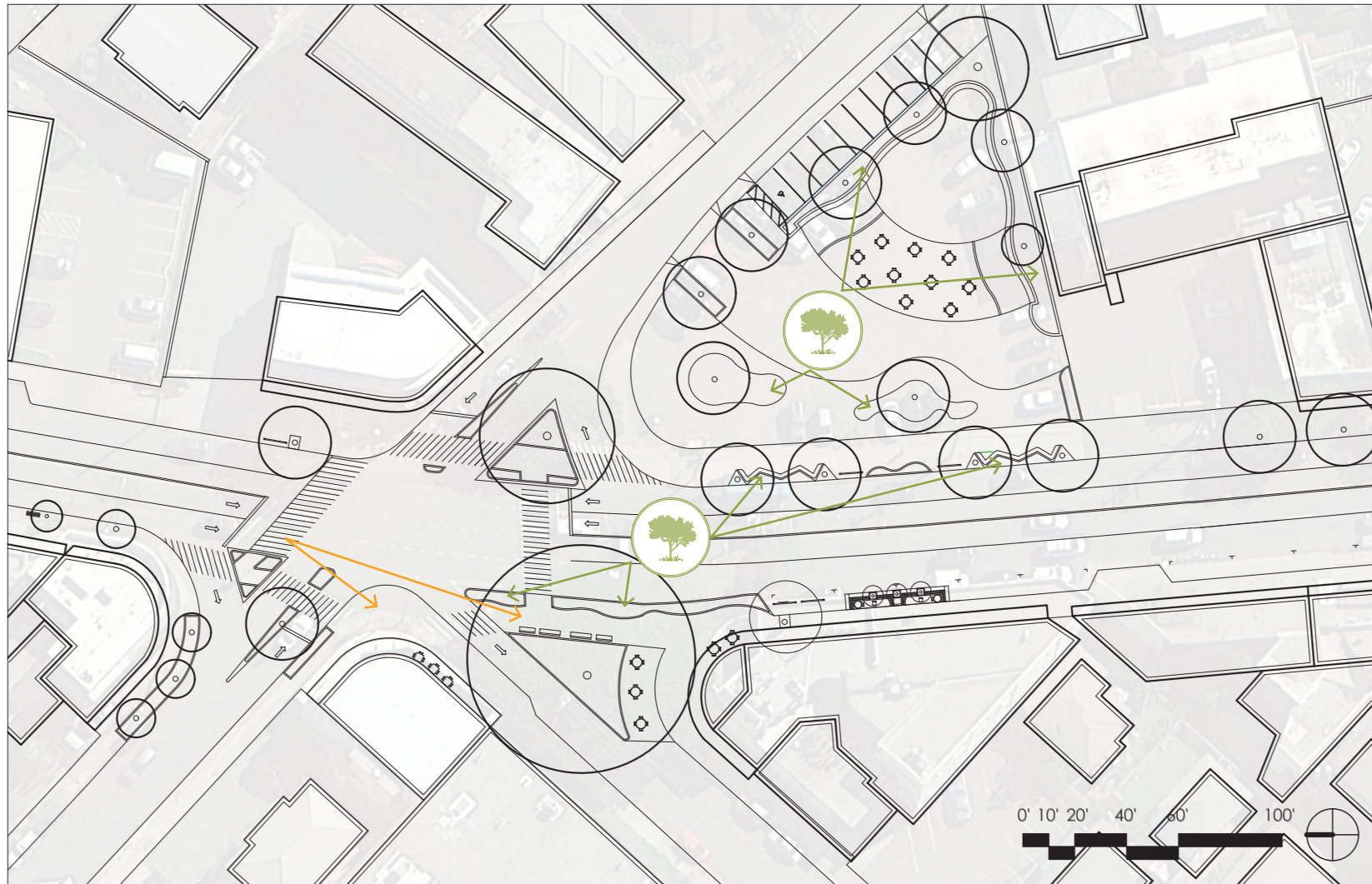


Figure 75. Site #3: Winam Avenue and Palani Avenue Intersection Design Toolkit Application (2)
Source: Stephanie Ing, University of Hawaii at Manoa



Tool #14: Curb Extensions

Curbs were extended at these places to decrease the crossing distance for the crosswalks. Space reclaimed from closing the right turn slip lane on Palani Avenue and added to the channelization island to create a mini plaza.

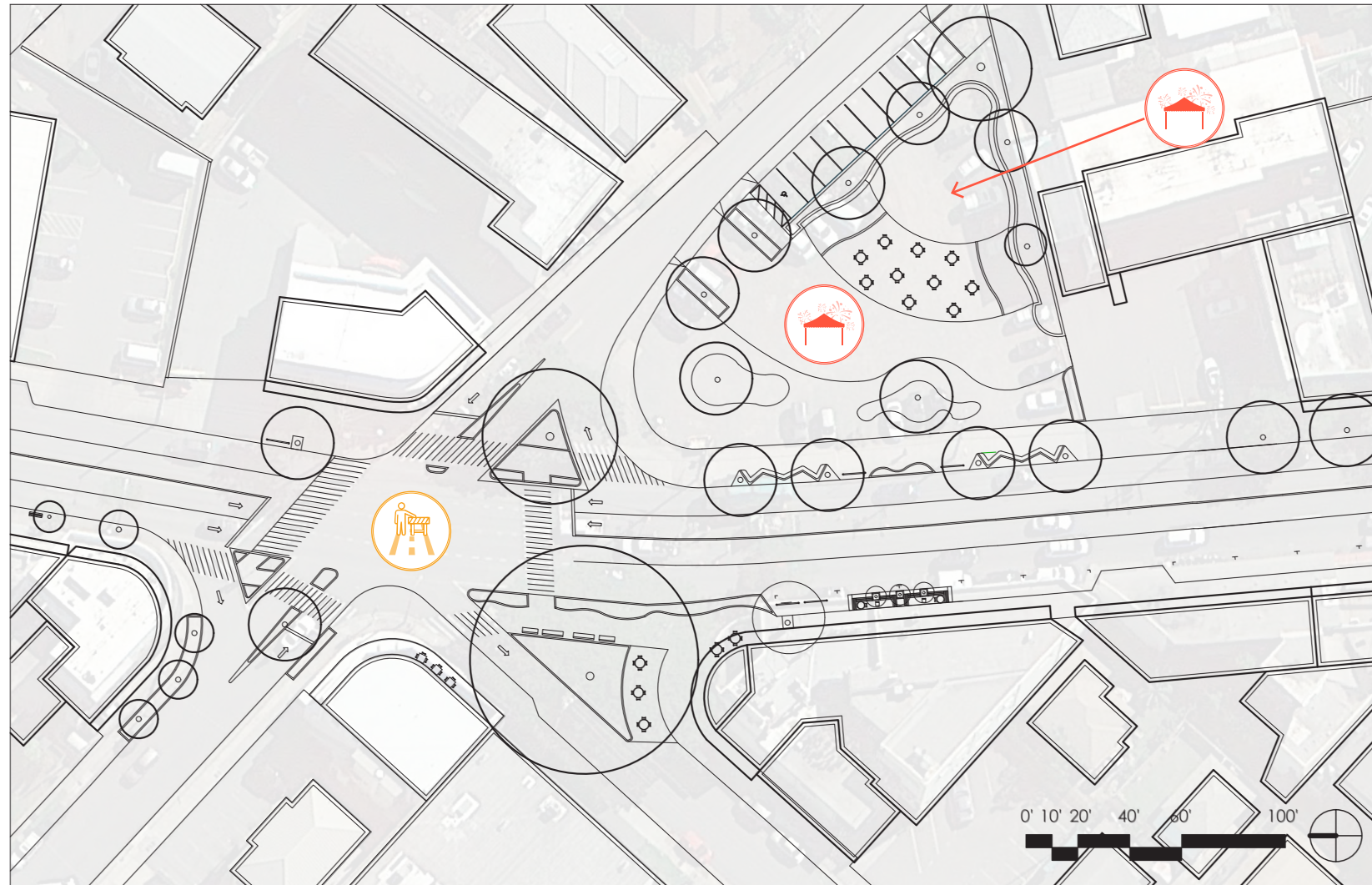


Tool #23: Greenery

Shrubs, planters, and trees are provided in the plaza area. Shrubs and trees are used in the parklets. Sidewalk gardens were made at the mini plaza.



Figure 76. Site #3: Winam Avenue and Palani Avenue Intersection Design Toolkit Application (3)
Source: Stephanie Ing, University of Hawaii at Manoa



Tool #10: Host Events

Events can be hosted in the plaza space. When the street is temporary closed, events can take place on the street area too. The large space provided at the intersection makes a great space for large stages to host concerts

Tool #17: Temporary Street Closures

Temporary Street Closures allow events to take place on the street. Events such as food truck events and concerts can even take place.

Figure 77. Site #3: Winam Avenue and Palani Avenue Intersection Design Toolkit Application (4)
Source: Stephanie Ing, University of Hawaii at Manoa

CHAPTER 12 | CONCLUSION

This project proposes the concept of redefining the street as a third place to transform an existing street from a space for transportation vehicles into a place that gives the people of the local community opportunities to gather, socialize, create memories, and take pride in their place of residence. The intent of this project is to define place, understand how a space can become a place, outline qualities that make a place successful, understand the third place concept, and investigate how a street can be redefined as a third place. In addition, this project also explored current methods of street design and various existing street design guidelines to identify which design principles and elements encourage turning streets into third places. The knowledge gained from the research was used to create two products: a process for developing a design toolkit targeted for a specific area and the design toolkit featuring design elements and strategies that can be used as tools to help transform an existing street into a third place.

Kapahulu Avenue in Honolulu, Hawaii was chosen as the site for this project to demonstrate the use of this project's proposed process and design toolkit to transform this street to be redefined as a third place for the people the Kapahulu Community. In addition to this demonstration, a section of Kapahulu Avenue was selected to be conceptually planned to show how the tools in the design toolkit could be applied on the street and transform it into a third place. The design toolkit created for this project was developed for Kapahulu Avenue. The toolkit was also developed with the intent that the Kapahulu community may use it as an inspirational guide for transforming their main commercial street into a third place tailored for their community.

The existing knowledge presented in the beginning chapters have shared valuable information concerning topics related to this project. Key concepts and events in history were presented to understand the formation of the American city and how they had an effect on the layout and perception of streets. With this knowledge, it was discovered that streets were once considered a place that allowed people to gather and socialize outside their homes. The discovery of this perception of the street from the past is what may be considered the first example of streets as third places. This prompted the need to distinguish what it is to be a place versus a space as place is a central concept in this project. Through this examination, definitions for both place and space were established for the context of this project. Space and place were defined:

Space is the area defined by established boundaries and location that is used for a specific purpose and is a result of the relationship between objects.

Place is a space defined by the interaction of people with the physical environment and with each other, where memories and meaning are created through experiences.

A further examination of what it means to be a successful place and principles of placemaking was needed to understand how a place can be designed to successfully serve the people of a local community. Once the qualities of a successful place were determined, the concept of third place, classified by Urban sociologist Ray Oldenburg as "informal public gathering places,"³⁴⁸ and its physical characteristics were studied to help determine how a street, Kapahulu Avenue, can be redefined to become a third place. Once this was studied, existing knowledge of the concept of streets as places and qualities of a great street were explored to identify the qualities that turn streets into places for people.

Using the existing knowledge presented in Part I, key qualities of a successful place, physical characteristics of third place, and qualities of a great street were

³⁴⁸ Ray Oldenburg, "Our Vanishing 'Third Places'," *Planning Commissioners Journal* 25 (1996-1997): 6, accessed March 11, 2015, <http://illinois-online.org/krassa/ps410/Readings/Third%20Places/Oldenburg-Vanishing%20third%20places%201997.pdf>.

identified. The combination of these qualities and characteristics were then identified as key elements that can be used to redefine a street into a third place. They were then used as design principles for identifying design elements and strategies that can be used as tools in the design toolkit.

Part II | The Research

The research conducted for this project examined existing street design methods, existing plans for improvements on Kapahulu Avenue, and various existing street design guidelines to identify design principles and elements that encourage turning streets into third places. Three existing street design methods were selected for their relevance to commercial street conditions of Kapahulu Avenue. Each of the three methods were analyzed to determine if they could be applied to Kapahulu Avenue for the purpose of turning it into a third place. Findings from this study determined that while these methods help turn a street into a place, but their application to Kapahulu Avenue was either not suitable for the conditions of this street or time it would take for a successful application to the street was out of the time constraints of this project.

Researching the existing plans for improvements on Kapahulu Avenue was necessary to understand measures that were taken to improve this street. This part of the research analyzed three existing plans for the area: the Honolulu Complete Streets Implementation Reports for Kapahulu Avenue, the Kapahulu Community Plan, and the Oahu Bike Plan. Findings from this study proved to be helpful in finding information about Kapahulu Avenue from community and stakeholder input which would be applied later in the process for developing a toolkit. Furthermore the Honolulu Complete Streets Implementation design recommendations proved to be a street design method that considered making the street safer for all users. These conceptual recommendations were used as a base for exploring potential sites along Kapahulu Avenue where the design toolkit could be applied.

The intent of the research from the case studies of various existing design guidelines was to learn how to structure the design toolkit. Five street design guidelines were chosen for their relevance to the commercial street conditions of Kapahulu Avenue and for their method of working with the community to develop the

design guidelines. Notable features were mentioned from each case study and used to determine a process for developing a toolkit targeted for specific area.

Part III | The Design Toolkit

The culmination of the existing knowledge and research resulted in the creation of a process for developing a design toolkit and the Kapahulu Design Toolkit. Steps in this process include:

1. site analysis
2. gather community and stakeholder input
3. define the users
4. define a vision and goals
5. define design principles.

To determine the qualities of the existing site as a place, the site analysis was divided into four categories. Each represented one of the four key qualities of a successful place which were examined in chapter two. Using this type of site analysis, Kapahulu Avenue was found to have some of the key qualities of a successful place which were used as a base when conceptually planning it as a third place.

Going through the process for developing the design toolkit led to determining tools for the design toolkit. This design toolkit was written exclusively for Kapahulu Avenue since certain tools are specifically targeted for the area. However, other tools mentioned in this toolkit can be used to create toolkits for different streets since some of these tools can be used to turn a street into a third place without having to be site specific. To demonstrate how the toolkit can be applied to the street, a site along Kapahulu Avenue was selected to be conceptually planned.

Various concepts about place and street design methods were investigated. Many street design methods exist today, but there are not many that look closely into what it means to become a place. The existing methods examined in this project address turning a street into a place; however not all of them were applicable for the purpose of this project since they focused primarily on changing the physical

conditions of the street to make it safer for either the pedestrians or all users of the street. The Main Street Program and its Four Point Approach was an exception to this as it considered the needs of the community and the people; however, it did not present strategies for physical changes of the street like the Complete Streets Implementation Study Reports.

The design toolkit and its development process presented in this project give the Kapahulu Community a guide for turning Kapahulu Avenue into a third place. Unlike the existing street design methods, existing plans for Kapahulu Avenue, and case studies researched, this design toolkit combines, street design elements and place design elements and strategies to change the layout and image of the street and sidewalk to create a third place.

A key factor that helps redefine a street into a third place is the input of the community and stakeholders. Community workshops, interviews, and surveys are ideal methods for obtaining direct and accurate input about the project area. They proved to be good sources of information about the community and had a good impact in the development of the design guidelines in the case studies. Due to time constraints of this project, these methods could not be employed and instead, alternative methods of obtaining community and stakeholder input, also mentioned in this project, were used.

The street is currently perceived as a space for vehicles. While this design toolkit was developed exclusively for Kapahulu Avenue and its community, the toolkit can become a basis for those who wish to look into design elements and strategies that strengthen the identity and sociability of a place through the design of their street. Although this design toolkit is used to turn streets into third places, it cannot be applied to all types of streets. This project was developed for streets with specific site conditions: a street in a commercial area surrounded by or within close proximity of residential areas. These conditions provide a good base for third places since the street is easily accessible and within walking distance from the residential area. The whole concept of a third place is to allow people to gather informally away from their homes and these site conditions are ideal for this type of place.

The design toolkit presented in this project is not meant to be an instructional, step-by-step guide for transforming Kapahulu Avenue into a third

place, but instead meant to be an inspirational guide for the Kapahulu Community. The Kapahulu Design Toolkit and the conceptually planned site are meant to be inspirations and a starting point for those who take an interest in developing this street and transforming it from a transportation space into the main destination of Kapahulu - a vibrant third place and a source of pride for the local community of Kapahulu.

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